MS4 Pollutant Reduction Plan (PRP)

West Whiteland Township

December, 2017
Revised January, 2022

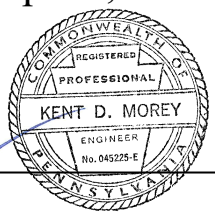
Spotts, Stevens and McCoy | Engineers and Environmental Consulting

MS4 Pollutant Reduction Plan (PRP)

Prepared for: West Whiteland Township
101 Commerce Drive
Exton, PA 19341

December, 2017
Revised January, 2022

Prepared by: Spotts, Stevens and McCoy



1-27-22

Kent D. Morey, P.E.

SSM File 101008.0310

MS4 Pollutant Reduction Plan (PRP)

West Whiteland Township

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GENERAL DESCRIPTION

West Whiteland Township (the MS4) is located in Chester County, Pennsylvania approximately 24 miles west of Center City Philadelphia. The Township is a mix of residential, commercial and light manufacturing with some institutional (school) land uses. The Urbanized Area (UA) from the 2010 census covers the entire Township. The extents of the UA are shown on Map 1 –Urbanized Area. All maps associated with this document may be found in Section B.

Geographically, the Township lies in the valley of West Valley Creek (west branch that flows into the Brandywine Creek). The West Valley Creek watershed consists of the northern 2/3rds of the Township. Broad Run (High Quality), East Branch of Chester Creek and Ridley Creek make up the remaining 1/3rd at the southern portion of the Township.

Due to the HQ designation for Broad Run, the Township must obtain coverage for the NPDES MS4 permit via an Individual Permit.

SECTION A – PUBLIC PARTICIPATION

The PRP was made available for public review and comment from _____. A hard copy of the PRP was available at the Township building and an electronic version was available on the Township's website. Comments on the PRP were solicited at both the _____ Board of Supervisors' meetings. No comments were received based upon the public advertisement nor were any comments expressed at either of the Board of Supervisors' meetings. Or The following comments were received:

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SECTION B – MAPS

We have set up the map in ArcGIS and implemented a grid system to help better locate items. The grid is labelled in columns (west to east) labelled A through G and in rows (north to south) labelled 1 through 7. This allows the reader to see more detail of the sewersheds and outfalls in smaller scale views (e.g. see Maps 5A – 5D) with the cell numbers so that one can then cross reference to the larger maps (see Maps 2 and 3) and see where within the Township the smaller maps are located.

The actual maps follow this section and are titled as follows:

- Map 1 – Urbanized Area
- Map 2 – Outfalls & Storm Sewers
- Map 3 - Sewersheds
- Maps 4A through 4D – Existing BMPs
- Maps 5A through 5D – Proposed BMPs and Sewersheds

Map 1
Urbanized Area
West Whiteland Township
Chester County, PA

EAST BRANCH BRANDYWINE CREEK

EAST BRANCH BRANDYWINE CREEK

PINE CREEK

VALLEY CREEK

VALLEY CREEK

BROAD RUN

TAYLOR RUN

EAST BRANCH CHESTER CREEK

RIDLEY CREEK

EAST BRANCH CHESTER CREEK

- Stream
- Railroad
- Parcel
- Watershed
- Urbanized Area
- Municipal Boundary

N

0 2,000 4,000 Feet

1:24,000

Data Source:
Stream, WWT &SSM, 2020
Railroad, PENNDOT, 2019
Parcel, Chester Co., 2020
Watershed, SSM, 2020
Urbanized Area, PENNDOT, 2020
Municipal Boundary, PENNDOT, 2014

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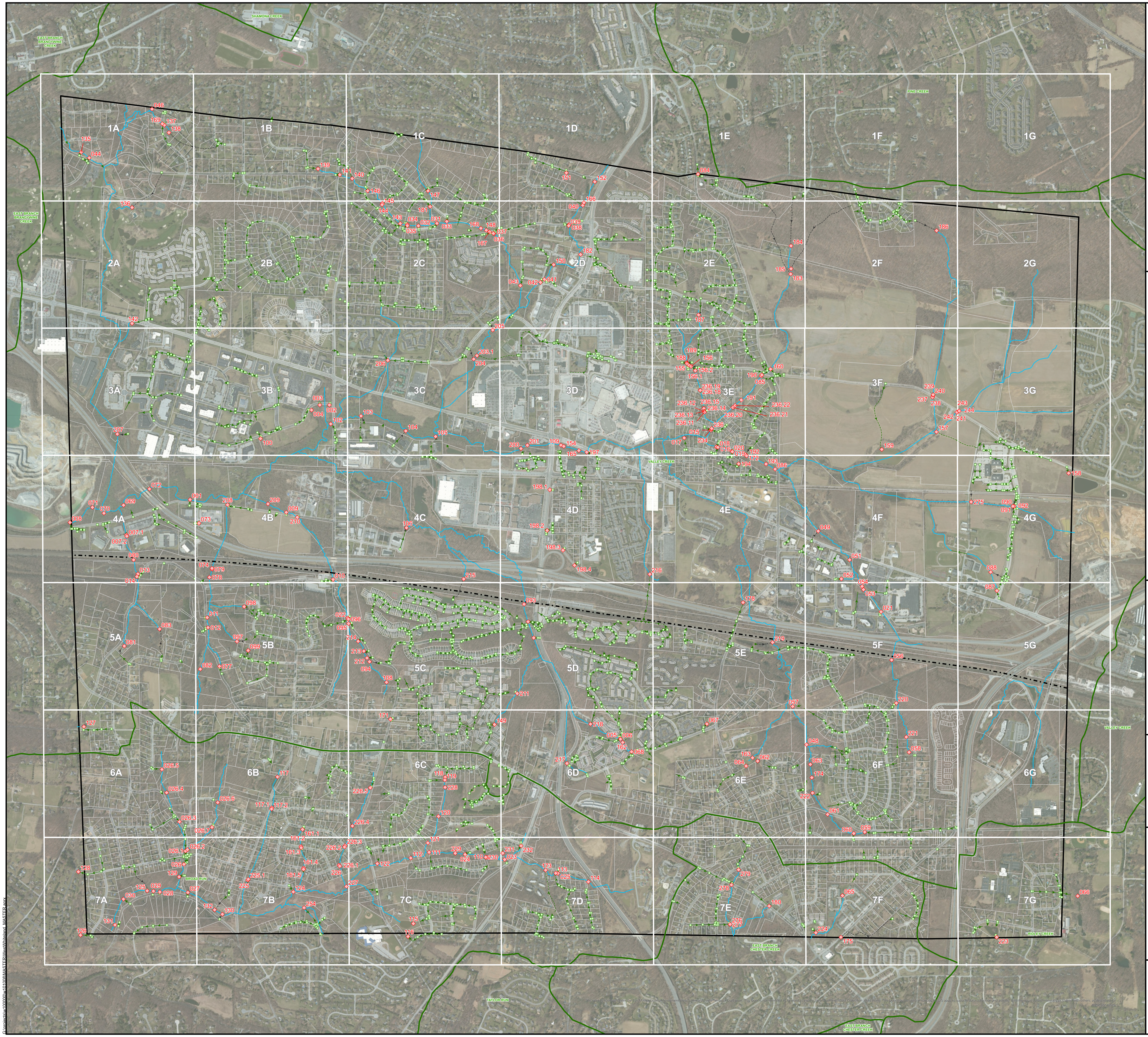

Map 2
Outfalls & Storm Sewers
West Whiteland Township
Chester County, PA

- Outfall
- Manhole
- Inlet
- Pipe
- Swale
- Overland Flow
- Railroad
- Stream
- Parcel
- Watershed
- Grid
- Municipal Boundary

0 1,000 2,000
Feet

1:8,000

Data Source:
Storm System, SSM, 2021
Streams, WWT & SSM, 2020
Parcels, Chester Co., 2020
Watershed, SSM, 2020
Municipal Boundary, PENNDOT, 2014
Grid, SSM, 2020

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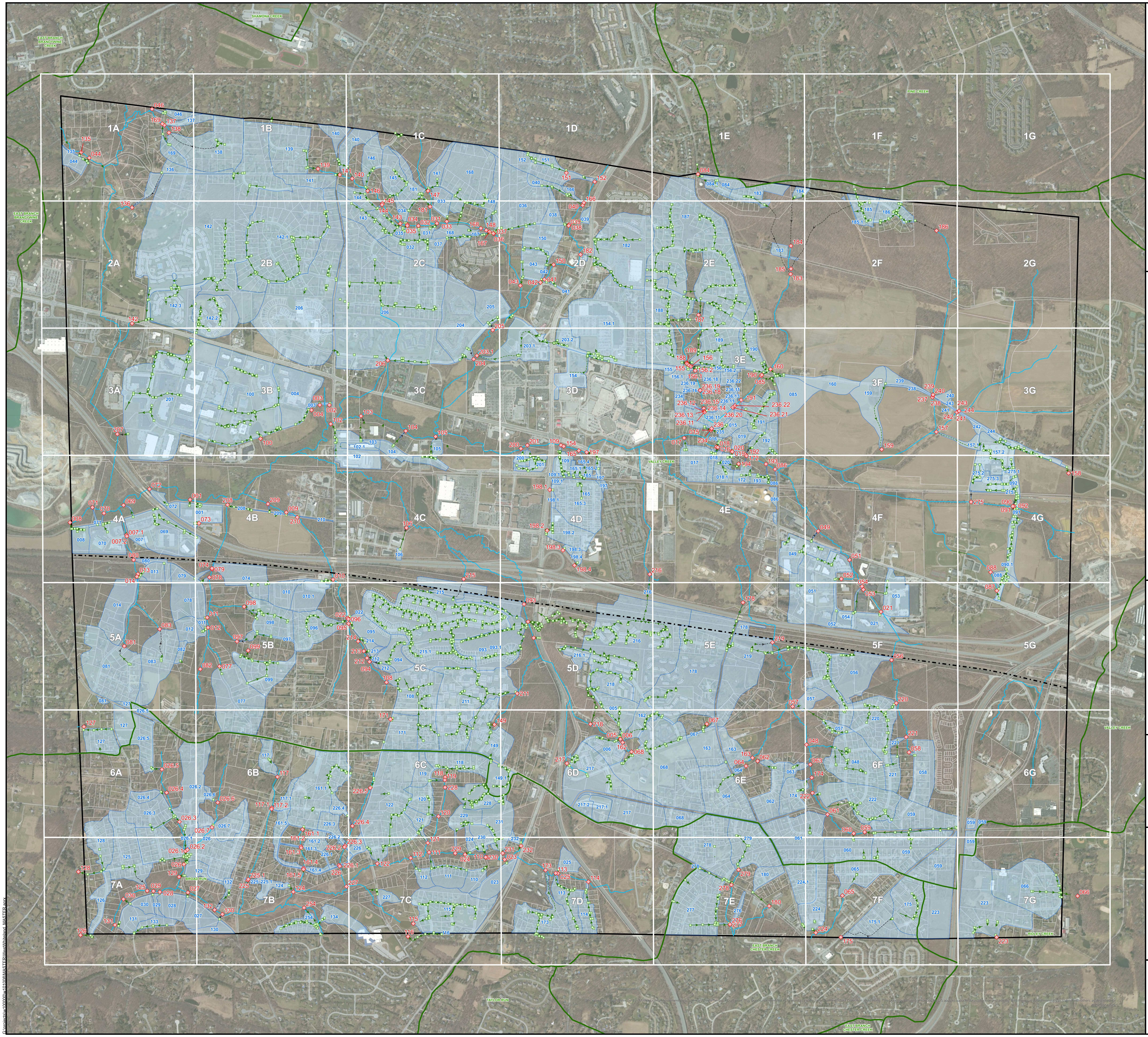

Map 3
Sewersheds
West Whiteland Township
Chester County, PA

- Outfall
- Manhole
- Inlet
- Pipe
- Swale
- Overland Flow
- Railroad
- Stream
- Watershed
- Sewersheds
- Municipal Boundary
- Grid
- Parcel

N

0 1,000 2,000 Feet

1:8,000

Data Source:
Storm System, SSM, 2021
Sewersheds, SSM, 2021
Streams, WWT & SSM, 2020
Parcels, Chester Co., 2020
Watershed, SSM, 2020
Municipal Boundary, PENNDOT, 2014
Grid, SSM, 2020

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Map 4A
Existing Wetlands 142.2
West Whiteland Township
Chester County, PA

- Outfall
- Manhole
- Inlet
- Pipe
- Swale
- Overland Flow
- Railroad
- Stream
- Grid
- Watershed
- Existing BMP
- Sewersheds
- Municipal Boundary
- Parcel

N

0 400 800 Feet

1:4,600

Data Source:
Stream, WWT &SSM, 2020
Railroad, PENNDOT, 2019
Parcel, Chester Co., 2020
Watershed, SSM, 2020
Storm System, SSM, 2021
BMPs, SSM, 2021
Municipal Boundary, PENNDOT, 2014
Sewersheds, SSM, 2021
Grid, SSM, 2020

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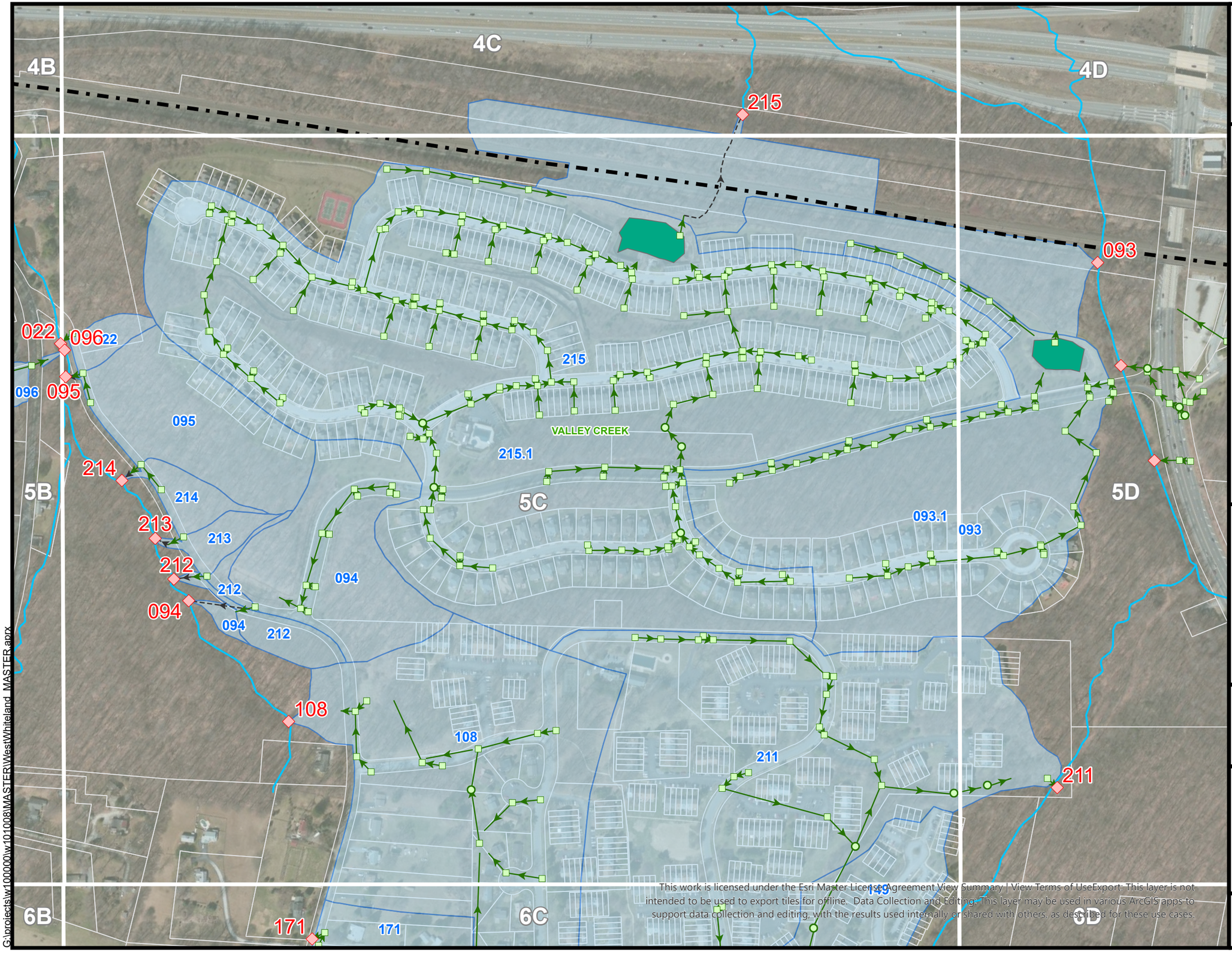
Map 4B
Existing Wet Ponds 215 & 93
West Whiteland Township
Chester County, PA



- Outfall
- Manhole
- Inlet
- Pipe
- Swale
- Overland Flow
- Railroad
- Stream
- Watershed
- Existing BMP
- Sewersheds
- Municipal Boundary
- Grid
- Parcel

0 300 600 Feet

1:4,000

Data Source:
Stream, WWT &SSM, 2020
Railroad, PENNDOT, 2019
Parcel, Chester Co., 2020
Watershed, SSM, 2020
Storm System, SSM, 2021
BMPs, SSM, 2021
Municipal Boundary, PENNDOT, 2014
Sewersheds, SSM, 2021
Grid, SSM, 2020

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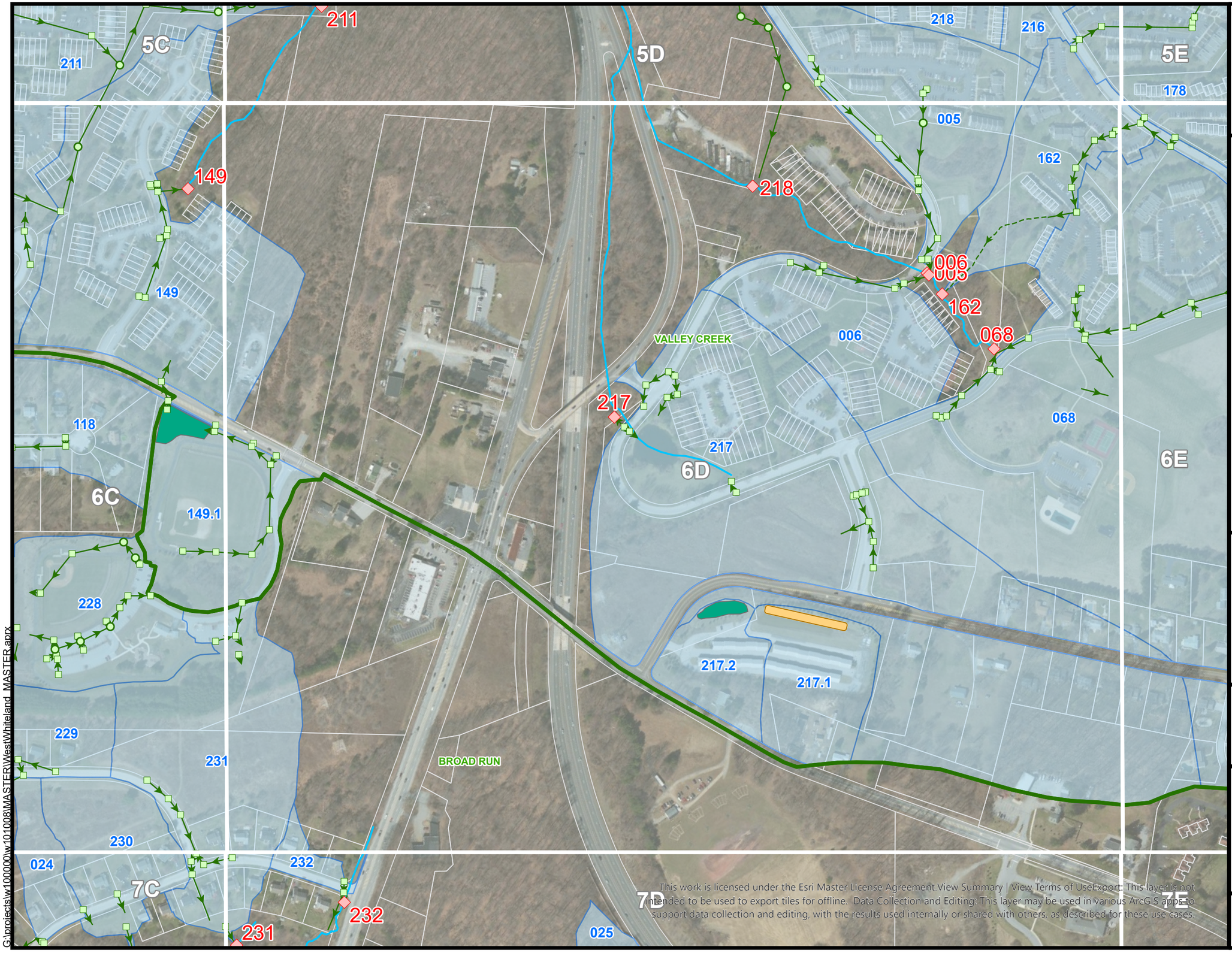
Map 4C
Existing Detention Basins 149.1 & 217.2 and Infiltration 217.1
West Whiteland Township
Chester County, PA



- Outfall
- Manhole
- Inlet
- Pipe
- Swale
- Overland Flow
- Railroad
- Stream
- Watershed
- Existing BMP
- Infiltration Bed
- Sewersheds
- Municipal Boundary
- Grid
- Parcel

N

0 300 600 Feet

1:4,000

Data Source:
Stream, WWT &SSM, 2020
Railroad, PENNDOT, 2019
Parcel, Chester Co., 2020
Watershed, SSM, 2020
Storm System, SSM, 2021
BMPs, SSM, 2021
Municipal Boundary, PENNDOT, 2014
Sewersheds, SSM, 2021
Grid, SSM, 2020
Infiltration Beds, SSM, 2021

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Map 4D
Existing Detention Basins 157.2 & 275.3 and Infiltration 275.1, 275 & 275.2
West Whiteland Township
Chester County, PA

238
239
238
237
240
241
243
244
241
3F
3G
242
157
244
157.1
157.2
158
158
VALLEY CREEK
275.2
275.3
275.1
092
275
4G
275
4F
092
090
091
090
090.1

- Outfall
- Manhole
- Inlet
- Pipe
- Swale
- Overland Flow
- Railroad
- Stream
- Watershed
- Infiltration Bed
- Existing BMP
- Sewersheds
- Municipal Boundary
- Grid
- Parcel

N

0 300 600 Feet

1:4,000

Data Source:
Stream, WWT &SSM, 2020
Railroad, PENNDOT, 2019
Parcel, Chester Co., 2020
Watershed, SSM, 2020
Storm System, SSM, 2021
BMPs, SSM, 2021
Municipal Boundary, PENNDOT, 2014
Sewersheds, SSM, 2021
Grid, SSM, 2020
Infiltration Beds, SSM, 2021

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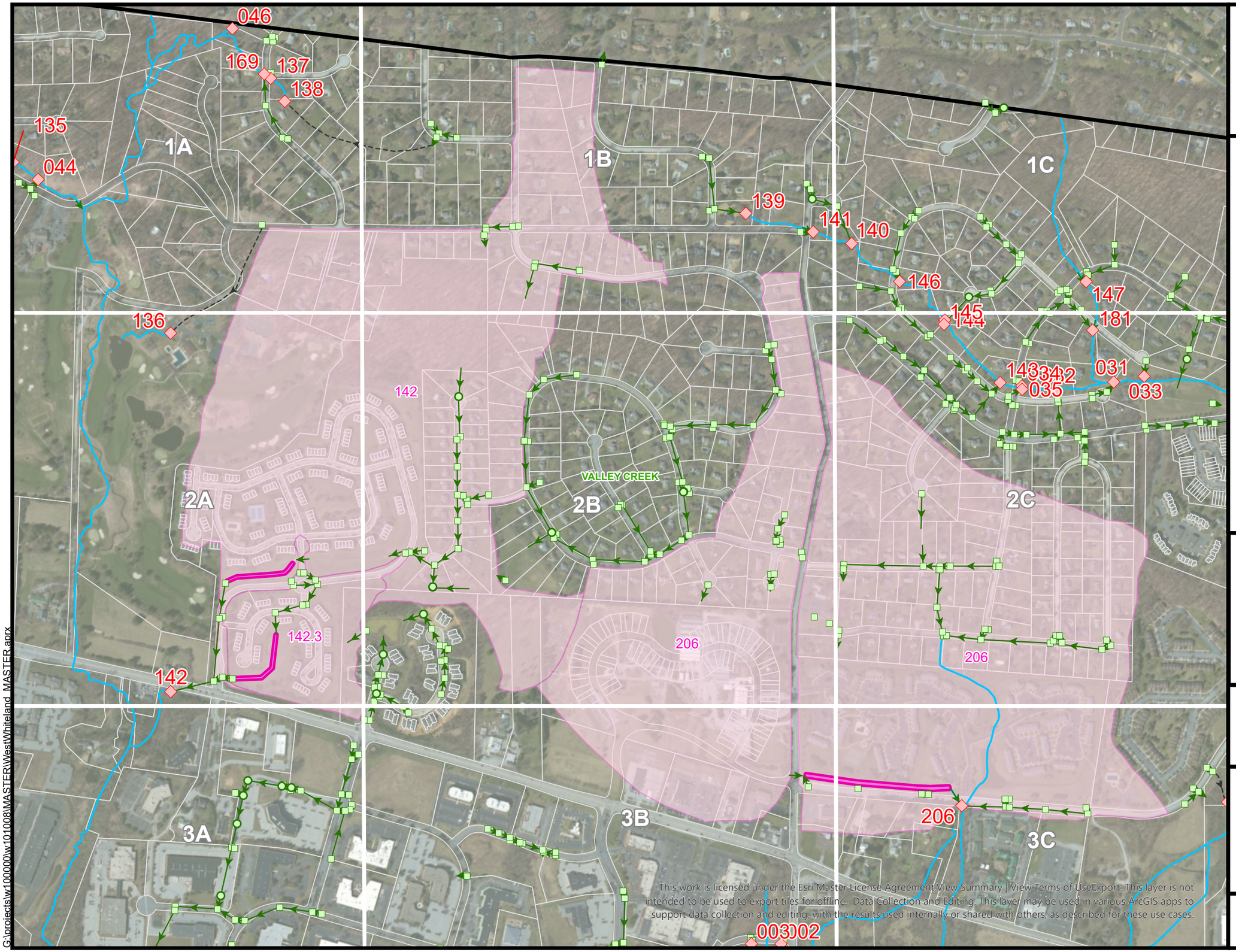
Map 5A
Proposed BMPs
142, 142.3 & 206.3
West Whiteland Township
Chester County, PA



- Outfall
- Manhole
- Inlet
- Pipe
- Swale
- Overland Flow
- Railroad
- Stream
- Watershed
- Infiltration Bed
- Proposed BMP
- Proposed BMP Sewersheds
- Municipal Boundary
- Grid
- Parcel

N

0 750 1,500 Feet

1:7,600

Data Source:
Stream, WWT &SSM, 2020
Railroad, PENNDOT, 2019
Parcel, Chester Co., 2020
Watershed, SSM, 2020
Storm System, SSM, 2021
Proposed BMP Sewersheds, SSM, 2021
Municipal Boundary, PENNDOT, 2014
Grid, SSM, 2020
Infiltration Beds, SSM, 2021
Proposed BMPs, SSM, 2021
BMPs, SSM, 2021

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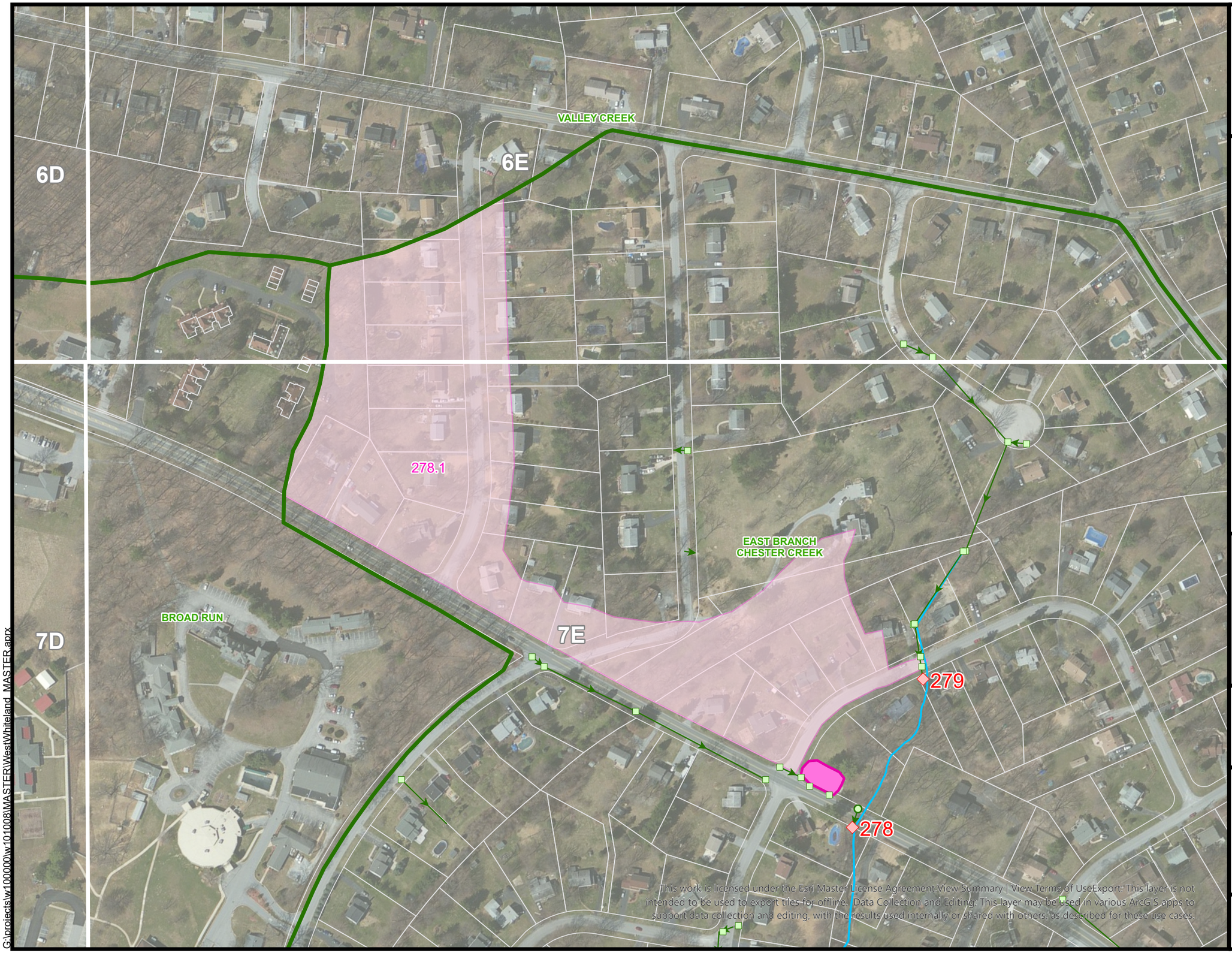
Map 5B
Proposed BMP 278.1
West Whiteland Township
Chester County, PA



- Outfall
- Manhole
- Inlet
- Pipe
- Swale
- Overland Flow
- Railroad
- Stream
- Watershed
- Infiltration Bed
- Proposed BMP
- Proposed BMP Sewersheds
- Municipal Boundary
- Grid
- Parcel

N

0 200 400 Feet

1:2,400

Data Source:
Stream, WWT &SSM, 2020
Railroad, PENNDOT, 2019
Parcel, Chester Co., 2020
Watershed, SSM, 2020
Storm System, SSM, 2021
Proposed BMP Sewersheds, SSM, 2021
Municipal Boundary, PENNDOT, 2014
Grid, SSM, 2020
Infiltration Beds, SSM, 2021
Proposed BMPs, SSM, 2021
BMPs, SSM, 2021

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Map 5C
Proposed BMP 224
West Whiteland Township
Chester County, PA

VALLEY CREEK

EAST BRANCH
CHESTER CREEK

224.1

224

7E

7F

180

065

224

175

- Outfall
- Manhole
- Inlet
- Pipe
- Swale
- Overland Flow
- Railroad
- Stream
- Watershed
- Proposed BMP
- Proposed BMP Sewersheds
- Municipal Boundary
- Grid
- Parcel

N

0 200 400 Feet

1:2,400

Data Source:
Stream, WWT &SSM, 2020
Railroad, PENNDOT, 2019
Parcel, Chester Co., 2020
Watershed, SSM, 2020
Storm System, SSM, 2021
Proposed BMP Sewersheds, SSM, 2021
Municipal Boundary, PENNDOT, 2014
Grid, SSM, 2020
Infiltration Beds, SSM, 2021
Proposed BMPs, SSM, 2021
BMPs, SSM, 2021

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Map 5D
Proposed BMP 223.1 & 223.2
West Whiteland Township
Chester County, PA

VALLEY CREEK

7F

223.1

EAST BRANCH
CHESTER CREEK

223.1

RIDLEY CREEK

7G

223.2

223

- Outfall
- Manhole
- Inlet
- Pipe
- Swale
- Overland Flow
- Railroad
- Stream
- Watershed
- Proposed BMP
- Proposed BMP Sewersheds
- Municipal Boundary
- Grid
- Parcel

N

0 250 500 Feet

1:3,000

Data Source:
Stream, WWT &SSM, 2020
Railroad, PENNDOT, 2019
Parcel, Chester Co., 2020
Watershed, SSM, 2020
Storm System, SSM, 2021
Proposed BMP Sewersheds, SSM, 2021
Municipal Boundary, PENNDOT, 2014
Grid, SSM, 2020
Infiltration Beds, SSM, 2021
Proposed BMPs, SSM, 2021
BMPs, SSM, 2021

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SECTION C – POLLUTANTS OF CONCERN

There are four primary watersheds within the Township as previously noted. The PaDEP requirements table incorrectly identifies a fifth watershed, Brandywine Creek (HUC-12 designation "Upper Brandywine Creek). The USGS NHD dataset, from which the watersheds have been identified, does not show the Upper Brandywine Creek HUC-12 within West Whiteland Township. All of these watersheds are identified by the Pennsylvania Department of Environmental Protection (PaDEP) in the requirements table provided at the end of this section. The overall watersheds are shown on Map 3- Sewersheds included in Section B. Their names and impairments are:

Impaired Downstream Waters Name	**Impairment**	**PaDEP Permit Appendix**
East Branch Chester Creek	Siltation	E
Ridley Creek	Siltation	E
West Valley Creek	Siltation	E
Broad Run	Siltation	E

PaDEP requires that the MS4 address each impairment in accordance with the appendix noted. For those impairments that require the Township to address impairments of Sediment (Siltation), the MS4 is required to prepare a Pollutant Reduction Plan (PRP) that demonstrates that the pollutant reduction(s) (lbs/year) proposed in the PRP have been achieved within 5 years following the PaDEP's approval of coverage under the Individual Permit. Sediments shall be reduced by 10%. This Pollutant Reduction Plan demonstrates that West Whiteland Township will reduce sediments by 10% in accordance with the Individual Permit requirements.

West Valley Creek and Broad Run are in the same HUC-12. Therefore, the Township has chosen to aggregate the loading reduction requirements of the two watersheds within the HUC-12 and all proposed BMPs are located within the West Valley Creek watershed.

Similarly, the East Branch Chester Creek and Ridley Creek are within the same HUC-12. However, in this HUC-12, BMPs will be located within both watersheds. Excess load reduction within the East Branch Chester Creek will offset a small shortfall within the Ridley Creek Watershed.

MS4 Name	NPDES ID	Individual Permit Required?	Reason	Impaired Downstream Waters or Applicable TMDL Name	Requirement(s)	Other Cause(s) of Impairment
Chester County						
WEST VINCENT TWP	PAG130172*	Yes	SP	Pickering Creek	Appendix B-Pathogens (5)	Cause Unknown (5), Water/Flow Variability (4c)
				East Branch Brandywine Creek		Cause Unknown (4a), Other Habitat Alterations, Water/Flow Variability (4c)
				Schuylkill River	Appendix C-PCB (4a)	
				Birch Run	Appendix B-Pathogens (5)	
				French Creek	Appendix B-Pathogens (5)	
WEST WHITELAND TWP	PAI130530	Yes	SP, IP	East Branch Brandywine Creek		Cause Unknown (4a), Water/Flow Variability (4c)
				Unnamed Tributaries to Valley Creek	Appendix E-Siltation (4a)	Water/Flow Variability (4c)
				Broad Run	Appendix E-Siltation (4a)	Water/Flow Variability (4c)
				West Valley Creek	Appendix E-Siltation (4a)	Water/Flow Variability (4c)
				Ridley Creek	Appendix E-Siltation (5)	Cause Unknown (5), Water/Flow Variability (4c)
				East Branch Chester Creek	Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
				Brandywine Creek	Appendix E-Siltation (4a)	
WESTTOWN TWP	PAI130528	Yes	TMDL Plan, SP, IP	Brandywine Creek	Appendix E-Siltation (4a)	
				East Branch Chester Creek	Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
				Ridley Creek	Appendix E-Siltation (5)	Cause Unknown (5), Water/Flow Variability (4c)
				Radley Run	Appendix E-Siltation (4a)	Water/Flow Variability (4c)
				Chester Creek	Appendix B-Pathogens (5), Appendix E-Siltation (5)	Cause Unknown (5), Flow Alterations, Other Habitat Alterations, Water/Flow Variability (4c)
				Goose Creek TMDL	TMDL Plan-Nutrients (4a)	Cause Unknown (4a)
				Hunters Run	Appendix E-Siltation (5)	Cause Unknown (5), Water/Flow Variability (4c)
				Plum Run	Appendix E-Siltation (4a)	Water/Flow Variability (4c)
WILLISTOWN TWP	PAI130521	Yes	SP, IP	Valley Creek	Appendix C-PCB (4a), Appendix B-Pathogens (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
				Hunters Run	Appendix E-Siltation (5)	Cause Unknown (5), Water/Flow Variability (4c)
				Crum Creek	Appendix E-Excessive Algal Growth, Siltation (5)	Cause Unknown (5), Water/Flow Variability (4c)
				Ridley Creek	Appendix E-Siltation (5)	Cause Unknown (5), Water/Flow Variability (4c)
				Little Valley Creek	Appendix C-PCB (4a), Appendix B-Pathogens (5), Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
				Schuylkill River	Appendix C-PCB (4a)	

SECTION D – DETERMINE EXISTING LOADING FOR POLLUTANTS OF CONCERN

Sewershed Mapping

As required by the original permit, West Whiteland Township had mapped their storm sewer system prior to the current permit renewal. West Whiteland Township's storm sewer system is identified on Map 2 - Storm Sewers and Outfalls in Section B.

In order to meet the requirements of the permit renewal for load reductions, efficiently map sewersheds, and provide a PRP that identifies Best Management Practices (BMPs) that can meet the required 10% sediment reductions, the Township has taken a very systematic approach to delineating storm sewersheds.

The overall storm sewersheds were delineated first, parsing out areas not contributing to any MS4 outfalls. These maps were not finalized nor were existing loading calculations finalized until the Township, along with its Consulting Engineer (SSM), identified potential areas for BMPs. A cost effective means to address sediment reduction is through the conversion of concrete lined channels and exposed earth (eroded) channels to bioswales that very efficiently remove pollutants.

Knowing that these locations for bioswales would be a prime source of sediment reduction, the SSM focused on utilizing these locations as the means of meeting the reduction requirements within the West Valley Creek/Broad Run watersheds.

Existing Loading and Reduction Calculations

SSM chose to use the simplified method (excel spreadsheet) for the calculations. The data source for the impervious and pervious areas were developed from the Chester County website GIS Cover Database. The BMP effectiveness utilized in this analyses are taken from the PaDEP BMP Effectiveness Values Table document 3800-PM-BCW0100m.

WEST VALLEY CREEK AND BROAD RUN HUC-12

West Valley Creek

Existing Sediment Loading							Existing BMPs									Proposed BMPs						
	Impervious		Pervious		Total			Impervious		Pervious							Impervious		Pervious			
Sewershed	Area (acres)	Load (lbs/yr)	Area (acres)	Load (lbs/yr)	Load (lbs/yr)		BMP Type	Area (Ac.)	Load (lbs/yr)	Area (Ac.)	Load (lbs/yr)	BMP Efficiency (%)	Load Reduction (lbs/yr)	Adjusted Load (lbs/yr)		BMP Type	Area (Ac.)	Load (lbs/yr)	Area (Ac.)	Load (lbs/yr)	BMP Efficiency (%)	Load Reduction (lbs/yr)
1	5.25	7,907	3.26	603	8,510									8,510								-
2	0.17	249	0.01	2	252									252								-
3	0.28	422	0.14	26	448									448								-
4	14.22	21,403	6.66	1,234	22,637									22,637								-
5	4.32	6,495	6.03	1,115	7,610									7,610								-
6	2.91	4,383	4.29	794	5,177									5,177								-
7	0.86	1,294	1.02	189	1,483									1,483								-
8	0.60	902	4.44	821	1,724									1,724								-
9	0.08	113	0.00	1	114									114								-
10	0.93	1,400	7.03	1,301	2,701									2,701								-
10.1	2.33	3,513	6.94	1,284	4,797									4,797								-
11	0.13	195	0.75	139	333									333								-
12	0.50	751	5.64	1,044	1,795									1,795								-
13	0.43	650	3.70	684	1,334									1,334								-
14	0.98	1,472	15.66	2,899	4,371									4,371								-
15	1.12	1,688	2.90	537	2,225									2,225								-
16	0.18	268	0.12	22	290									290								-
17	3.74	5,630	6.71	1,243	6,873									6,873								-
18	0.63	941	2.21	409	1,350									1,350								-
18.1	1.17	1,762	2.46	456	2,218									2,218								-
19	0.87	1,303	2.74	507	1,810									1,810								-
20	0.60	901	1.12	207	1,107									1,107								-
21	4.28	6,434	4.34	803	7,237									7,237								-
22	0.02	23	0.81	151	174									174								-
31	0.52	787	1.28	238	1,025									1,025								
32	2.35	3,539	8.77	1,624	5,163									5,163								
33	1.00	1,510	3.75	693	2,203									2,203								
34	0.50	748	1.20	221	969									969								
35	0.55	829	0.81	151	980									980								
36	2.09	3,147	25.09	4,645	7,791									7,791								
37	0.72	1,083	2.53	468	1,551									1,551								
38	0.46	693	3.48	645	1,338									1,338								
39	0.36	543	0.43	79	621									621								
40	0.56	849	2.40	444	1,293									1,293								
41	0.52	787	0.02	4	792									792								
42	0.18	268	0.00	1	269									269								
43	3.92	5,898	3.72	689	6,587									6,587								

44	0.36	547	3.43	634	1,181									1,181							
46	0.26	386	2.25	416	802									802							
48	6.82	10,255	17.88	3,311	13,566									13,566							
49	5.78	8,699	6.28	1,162	9,861									9,861							
51	16.35	24,597	17.24	3,192	27,789									27,789							
52	0.93	1,405	0.71	131	1,536									1,536							
53	8.47	12,753	2.30	427	13,179									13,179							
54	1.95	2,939	1.36	251	3,190									3,190							
56	1.67	2,520	17.11	3,167	5,687									5,687							
057	0.05	81	4.36	806	887									887							
057	1.08	1,627	1.39	257	1,884									1,884							
58	1.56	2,354	12.73	2,357	4,712									4,712							
59	9.29	13,985	49.97	9,251	23,237									23,237							
60	2.10	3,160	9.77	1,809	4,970									4,970							
61	2.68	4,039	23.75	4,396	8,436									8,436							
62	2.41	3,624	9.12	1,688	5,312									5,312							
63	0.38	567	2.38	440	1,007									1,007							
64	3.51	5,283	18.76	3,472	8,755									8,755							
67	0.38	573	0.02	4	577									577							
68	12.52	18,847	49.86	9,230	28,077									28,077							
69	10.39	15,630	12.89	2,387	18,017									18,017							
70	5.36	8,070	6.23	1,153	9,223									9,223							
71	0.10	149	0.38	70	219									219							
72	0.40	602	2.66	492	1,094									1,094							
73	0.14	208	0.10	18	226									226							
74	0.84	1,257	12.80	2,369	3,626									3,626							
77	2.66	4,009	26.58	4,921	8,930									8,930							
78	0.43	643	12.68	2,348	2,990									2,990							
79	0.31	461	3.84	711	1,172									1,172							
80	0.16	240	2.49	462	702									702							
81	4.96	7,460	29.91	5,537	12,997									12,997							
82	0.33	489	1.26	234	723									723							
83	1.59	2,387	19.43	3,596	5,983									5,983							
84	2.15	3,238	3.97	735	3,974									3,974							
84.1	This is a subshed within 84																				
85	0.02	32	11.24	2,081	2,113									2,113							
86	0.40	596	1.04	193	790									790							
87	0.00	-	0.05	10	10									10							
88	0.40	607	3.07	569	1,176									1,176							
90	0.19	290	0.08	15	305									305							
090.1	1.21	1,828	3.71	686	2,514									2,514							
91	0.60	903	0.03	5	909									909							
92	1.06	1,597	0.35	66	1,663									1,663							

93	6.95	10,463	23.52	4,355	14,818									7,532								
93.1	This is a subshed within 93						Wetpond	5.79	8713	18.53	3430	60%	7286									
94	1.01	1,515	7.37	1,364	2,879									2,879								
94.1	0.00	-	0.27	51	51									51								
95	0.70	1,059	6.46	1,196	2,255									2,255								
96	2.99	4,502	11.68	2,163	6,665									6,665								
97	0.55	824	0.98	181	1,006									1,006								
98	2.65	3,989	11.50	2,129	6,118									6,118								
99	3.13	4,704	11.47	2,124	6,828									6,828								
100	27.96	42,074	31.48	5,828	47,902									47,902								
102	7.40	11,138	4.98	922	12,060									12,060								
102.1	1.74	2,617	0.50	93	2,710									2,710								
103	0.54	813	0.44	81	894									894								
104	2.35	3,534	1.53	282	3,816									3,816								
105	1.79	2,690	3.02	559	3,249									3,249								
106	0.17	250	0.40	74	324									324								
108	6.54	9,838	22.80	4,220	14,058									14,058								
109	2.41	3,632	1.46	270	3,902									3,902								
109.1	0.66	989	0.48	89	1,079									1,079								
127	2.07	3,108	14.01	2,593	5,701									5,701								
136	0.59	881	5.50	1,018	1,899									1,899								
137	0.65	983	2.64	489	1,472									1,472								
138	2.84	4,277	27.38	5,068	9,344									9,344								
139	3.09	4,657	16.74	3,099	7,756									7,756								
140	1.19	1,791	9.81	1,816	3,607									3,607								
141	0.65	974	6.11	1,131	2,106									2,106								
142	26.08	39,248	127.90	23,677	62,925									62,925		Bioswale	26.08	39,248	127.90	23,677	80%	50,340
142.1	12.21	18,369	62.49	11,567	29,937									29,937								
142.2	5.15	7,752	13.08	2,422	10,175		Wetlands	5.15	7752	13.08	2422	60%	6105	4,070								
142.3	5.02	7,557	14.38	2,663	10,220									10,220		Bioswale	5.02	7,557	14.38	2,663	80%	8,176
143	1.86	2,796	8.81	1,631	4,427									4,427								
144	1.39	2,090	3.92	726	2,816									2,816								
145	2.45	3,681	7.08	1,311	4,992									4,992								
146	1.20	1,811	5.93	1,099	2,909									2,909								
147	0.37	560	3.83	709	1,269									1,269								
148	1.03	1,548	5.14	952	2,499									2,499								
149	6.43	9,681	11.70	2,165	11,846									11,846								
149.1	0.65	975	6.65	1,231	2,205		Detention	0.65	975	6.65	1231	10%	221	1,985								
150	4.49	6,764	5.99	1,108	7,872									7,872								
151	0.91	1,375	2.42	447	1,822									1,822								
152	1.46	2,203	12.29	2,276	4,479									4,479								
154	5.17	7,777	4.43	821	8,598									8,598								
154.1	28.89	43,479	24.89	4,608	48,087									48,087								

155	0.35	520	1.22	226	747										747							
156	0.04	64	0.35	64	128										128							
156.1	0.79	1,195	4.00	740	1,934										1,934							
156.2	0.47	714	0.85	158	872										872							
157.1	0.22	334	2.26	419	753										753							
157.2	8.17	12,298	5.94	1,100	13,398		Det. Basin	8.17	12298	5.94	1100	10%	1340		12,059							
158	0.02	26	0.05	9	35										35							
159	0.02	29	13.44	2,488	2,517										2,517							
160	0.01	11	5.79	1,072	1,084										1,084							
162	2.47	3,717	4.21	779	4,496										4,496							
163	1.58	2,373	15.46	2,862	5,236										5,236							
165	0.70	1,058	0.32	59	1,117										1,117							
165.1	1.12	1,683	0.61	112	1,795										1,795							
165.2	0.58	880	0.45	83	963										963							
165.3	5.86	8,823	16.34	3,024	11,848										11,848							
166	0.05	70	1.08	199	269										269							
168	2.78	4,188	31.28	5,790	9,979										9,979							
169	0.84	1,265	3.08	571	1,836										1,836							
171	1.40	2,113	9.98	1,847	3,960										3,960							
172	0.92	1,384	1.96	362	1,746										1,746							
174	1.62	2,442	7.00	1,295	3,737										3,737							
178	14.77	22,221	47.22	8,741	30,963										30,963							
181	1.83	2,761	7.21	1,335	4,096										4,096							
182	16.19	24,358	21.57	3,993	28,351										28,351							
183	2.45	3,692	7.64	1,414	5,107										5,107							
184	0.45	677	1.00	185	862										862							
185	2.26	3,395	5.01	927	4,321										4,321							
185.1	0.14	208	0.34	63	271										271							
186	2.47	3,712	4.44	821	4,534										4,534							
187	22.70	34,159	65.38	12,102	46,262										46,262							
187.1	0.00	-	0.02	3	3										3							
188	9.27	13,955	22.26	4,120	18,076										18,076		Bioswale	9.27	13,955	22.26	4,120	80%	14,460
189	6.79	10,223	17.58	3,254	13,477										13,477							
190	2.67	4,014	9.09	1,683	5,697										5,697							
191	3.38	5,085	8.36	1,547	6,632										6,632							
192	1.47	2,216	5.84	1,082	3,298										3,298							
193	0.54	807	1.56	289	1,095										1,095							
197	0.81	1,213	0.56	104	1,317										1,317							
198.1	0.18	276	0.54	100	377										377							
198.2	4.46	6,717	6.13	1,135	7,851										7,851							
198.3	0.21	319	0.55	102	420										420							
198.4	0.41	615	0.97	180	795										795							
200	1.55	2,330	0.57	105	2,435										2,435							

201	1.87	2,813	1.95	360	3,174									3,174							
203.1	6.89	10,364	10.46	1,936	12,301									12,301							
203.2	3.05	4,586	1.97	365	4,951									4,951							
204	11.11	16,721	17.38	3,217	19,939									19,939							
205	4.67	7,021	5.98	1,107	8,128									8,128							
206	59.64	89,740	152.63	28,256	117,995									117,995		Bioswale	59.64	89,740	152.63	28,256	80%	94,396
207	54.18	81,525	37.84	7,006	88,531									88,531							
208	0.23	343	0.00	0	343									343							
209	0.12	178	0.06	11	189									189							
210	0.24	361	0.05	9	370									370							
211	14.97	22,523	28.24	5,228	27,751									27,751							
212	0.01	19	0.39	72	91									91							
212	0.20	303	1.13	209	512									512							
213	0.04	56	0.93	172	228									228							
214	0.03	49	1.22	225	274									274							
215	34.59	52,048	48.80	9,033	61,081									26,937							
215.1	This is a subshed within 215						Wetpond	32.68	49183	41.72	7724	60%	34144								
216	18.73	28,189	56.93	10,538	38,727									38,727							
216.1	2.10	3,159	1.74	322	3,482									3,482							
217	8.74	13,151	40.47	7,491	20,642									17,290							
217.1	These are subsheds within 217 to BMPs. 217.1 discharges to 217.2						Infilt. Facility	1.58	2385	3.32	614	95%	3134								
217.2							Det. Basin	1.21	1821	1.92	355	10%	218								
218	5.55	8,357	4.48	829	9,186									9,186							
219	6.70	10,090	37.56	6,953	17,042									17,042							
220	6.01	9,040	16.25	3,008	12,047									12,047							
221	0.06	89	0.67	125	214									214							
221	1.53	2,298	3.47	643	2,941									2,941							
222	6.56	9,874	16.32	3,021	12,896									12,896							
234	1.91	2,882	2.63	488	3,369									3,369							
235	0.27	405	0.37	69	475									475							
236	0.09	136	0.06	11	147									147							
236.11	0.20	301	0.68	125	426									426							
236.11	0.57	851	0.66	121	972									972							
236.11	1.39	2,086	6.33	1,173	3,258									3,258							
236.12	0.29	432	0.13	24	456									456							
236.13	0.35	522	0.05	9	531									531							
236.14	0.03	39	0.05	9	47									47							
236.15	0.25	380	0.25	46	426									426							
236.16	0.31	459	0.16	30	489									489							
236.17	0.65	978	1.19	220	1,198									1,198							
236.18	1.07	1,606	2.02	375	1,981									1,981							
236.19	0.44	660	0.76	141	802									802							
236.2	0.06	97	0.00	1	98									98							

236.21	0.01	17	0.00	1	18									18								
236.22	0.46	696	0.76	141	837									837								
238	0.00	0	0.22	41	41									41								
239	0.00	1	2.72	503	505									505								
240	0.00	-	1.23	228	228									228								
242	0.07	108	0.95	175	283									283								
243	0.00	-	0.29	54	54									54								
244	0.11	170	0.67	124	294									294								
275	0.10	144	1.10	203	347									347								
275.1	1.95	2,940	0.37	69	3,009		Infil	1.95	2940	0.37	69	95%	2859									
275.2	1.57	2,360	0.30	56	2,416		Infil	1.57	2360	0.30	56	95%	2295									
275.3	2.89	4,352	1.87	346	4,698		Dry Det.	2.89	4617	1.87	352	10%	497	4,201								
Totals =	745.86	acres	1,963.61	acres	1,485,855							**Valley Creek Adj Load =**		1,427,485								
												Broad Run Adj Load=		195,251								
												Total Adj Load =		1,622,736								
		Imp (lbs/ac/yr)		Perv (lbs/ac/yr)								**Reqd 10% Reduction (lbs/yr):**		162,274						**HUC-12 Total Removed (lbs/yr):**		167,372
		1504.78		185.12																**Excess Loading Removed (lbs/yr):**		5,099

WEST VALLEY CREEK AND BROAD RUN HUC-12

Broad Run

Existing Sediment Loading							Existing BMPs							Proposed BMPs						
	Impervious		Pervious		Total			Impervious	Pervious						Impervious	Pervious				
Outfall	Area (acres)	Load (lbs/yr)	Area (acres)	Load (lbs/yr)	Load (lbs/yr)		BMP Type	Load (lbs/yr)	Load (lbs/yr)	BMP Efficiency (%)	Load Reduction (lbs/yr)	Adjusted Load (lbs/yr)		BMP Type	Load (lbs/yr)	Load (lbs/yr)	BMP Efficiency (%)	Load Reduction (lbs/yr)	Adjusted Load (lbs/yr)
23	0.84	1,267	7.67	1,421	2,688							2,688							
24	0.25	382	1.71	316	698							698							
25	0.46	695	3.56	659	1,354							1,354							
26	7.36	11,073	29.02	5,373	16,446							16,446							
26.1	0.09	129	0.15	28	156							156							
26.2	2.44	3,666	21.01	3,890	7,556							7,556							
26.3	1.99	2,987	10.31	1,908	4,895							4,895							
26.4	0.29	444	2.68	495	939							939							
26.5	2.03	3,051	9.55	1,768	4,819							4,819							
26.6	0.15	223	0.75	140	363							363							
26.7	1.75	2,634	8.23	1,524	4,158							4,158							
27	0.54	811	7.50	1,389	2,200							2,200							
28	0.25	374	6.60	1,222	1,596							1,596							
29	0.07	98	1.17	216	314							314							
30	0.19	289	3.19	590	879							879							
110	0.58	867	3.78	699	1,566							1,566							
111	1.06	1,596	6.94	1,284	2,880							2,880							
112	0.49	743	2.77	513	1,256							1,256							
113	1.61	2,426	8.11	1,502	3,928							3,928							
114	1.19	1,797	4.68	867	2,664							2,664							
115	6.80	10,227	24.88	4,606	14,833							14,833							
116	0.23	345	0.04	8	353							353							
117	1.03	1,551	3.44	636	2,188							2,188							
117.1	0.40	601	2.43	450	1,051							1,051							
117.2	0.07	103	0.02	4	108							108							
118	1.81	2,725	9.52	1,762	4,488							4,488							
119	0.71	1,071	4.71	872	1,943							1,943							
120	1.65	2,477	5.20	962	3,439							3,439							
121	0.98	1,475	3.29	609	2,084			1,475	609	0%	-	2,084							
122	7.02	10,569	38.98	7,216	17,785			10,569	7,216	0%	-	17,785							

124	1.38	2,074	1.84	341	2,415							2,415							
125	4.54	6,825	16.37	3,031	9,856							9,856							
126	2.03	3,056	3.80	704	3,760							3,760							
128	2.78	4,186	8.39	1,553	5,740							5,740							
129	0.48	729	3.77	699	1,427							1,427							
130	0.15	221	3.27	605	826							826							
131	0.18	277	6.23	1,154	1,430							1,430							
132	0.47	707	1.17	216	924							924							
133	0.63	953	2.89	536	1,489							1,489							
134	3.35	5,044	8.60	1,591	6,636							6,636							
161.1	6.99	10,518	24.67	4,568	15,086							15,086							
161.2	0.88	1,321	3.38	625	1,946							1,946							
161.3	0.30	447	0.01	3	450							450							
161.4	0.82	1,239	1.61	299	1,538							1,538							
161.5	1.48	2,223	3.03	561	2,784							2,784							
173	3.12	4,700	12.76	2,363	7,063							7,063							
225	0.13	194	0.15	28	222							222							
225.1	0.21	312	0.37	68	380							380							
226	0.92	1,384	1.65	305	1,689							1,689							
226.1	0.59	894	0.49	91	985							985							
226.2	0.29	435	0.11	21	456							456							
226.3	1.04	1,562	3.94	729	2,291							2,291							
226.4	0.87	1,315	1.97	365	1,681							1,681							
226.5	0.06	84	0.02	4	88							88							
227	0.49	731	1.98	366	1,097							1,097							
228	1.71	2,570	7.36	1,362	3,932							3,932							
229	0.92	1,386	5.50	1,017	2,403							2,403							
230	0.69	1,038	4.25	787	1,825							1,825							
231	1.51	2,265	10.91	2,019	4,284							4,284							
232	0.39	583	0.46	85	668							668							
254	0.03	44	1.14	210	255							255							
Totals =	83.74	acres	374.00	acres	195,251							195,251							
		Imp (lbs/ac/yr)		Perv (lbs/ac/yr)															
		1504.78		185.12															

EAST BRANCH CHESTER CREEK AND RIDLEY CREEK HUC-12

East Branch Chester Creek

Existing Sediment Loading							Existing BMPs							Proposed BMPs						
	Impervious		Pervious		Total			Impervious	Pervious						Impervious		Pervious			
Outfall	Area (acres)	Load (lbs/yr)	Area (acres)	Load (lbs/yr)	Load (lbs/yr)		BMP Type	Load (lbs/yr)	Load (lbs/yr)	BMP Efficiency (%)	Load Reduction (lbs/yr)	Adjusted Load (lbs/yr)		BMP Type	Area (ac)	Load (lbs/yr)	Area (ac)	Load (lbs/yr)	BMP Efficiency (%)	Load Reduction (lbs/yr)
65	2.44	3,678	10.48	1,940	5,618							5,618								
175	3.00	4,521	13.18	2,440	6,962							6,962								
180	1.26	1,890	3.37	625	2,515							2,515								
224	4.33	6,522	17.34	3,210	9,732							9,732		Rain Garden	4.33	6,522	17.34	3,210	55%	5,352
276	0.62	937	0.86	159	1,096							1,096								
277	6.20	9,328	24.19	4,478	13,806							13,806								
278	4.31	6,482	23.63	4,374	10,857							10,857		Rain Garden	2.22	3,340	9.45	1749	55%	2,799
279	3.18	4,778	16.45	3,045	7,823							7,823								
Totals =	25.34	acres	109.50	acres	58,408				**East Branch Chester Creek Adj Load =**			58,408								
											Ridley Creek Adj Load =	34,048								
											Total HUC-12 Load:	92,456								
		Imp (lbs/ac/yr)	Perv (lbs/ac/yr)													**East Branch Chester Creek Removed (lbs/yr):**				8,151
		1504.78		185.12					**Total HUC-12 Reqd Reduction:**			9,246					**Ridley Creek Removed (lbs/yr):**			1,933
																	HUC-12 Total Removed (lbs/yr):			10,084
																Excess Loading Removed (lbs/yr):			839

EAST BRANCH CHESTER CREEK AND RIDLEY CREEK HUC-12

Ridley Creek

Existing Sediment Loading							Existing BMPs							Proposed BMPs						
	Impervious		Pervious		Total			Impervious	Pervious						Impervious		Pervious			
Outfall	Area (acres)	Load (lbs/yr)	Area (acres)	Load (lbs/yr)	Load (lbs/yr)		BMP Type	Load (lbs/yr)	Load (lbs/yr)	BMP Efficiency (%)	Load Reduction (lbs/yr)	Adjusted Load (lbs/yr)		BMP Type	Area (ac)	Load (lbs/yr)	Area (ac)	Load (lbs/yr)	BMP Efficiency (%)	Load Reduction (lbs/yr)
66	9.83	14,787	21.34	3,951	18,738							18,738								
223	4.06	6,115	49.67	9,194	15,309							15,309		Rain Garden #1	1.01	1,515	5.78	1,069	55%	1,421.47
														Rain Garden #2	0.24	365	3.05	564	55%	511.29
Totals =	13.89	acres	71.01	acres	34,048					**Ridley Creek Adj Load =**		34,048								
										Reqd 10% Reduction (lbs/yr):		3,405						**Reduction (lbs/yr):**		1,933
		lmp (lbs/ac/yr)		Perv (lbs/ac/yr)																
		1504.78		185.12																

SECTION E – SELECT BMPS TO ACHIEVE THE MINIMUM REQUIRED REDUCTIONS IN POLLUTANT LOADING

As demonstrated in the spreadsheets on the previous pages the required 10% sediment reduction will be achieved. Locations of proposed BMP's are identified on the Maps 5A – 5D Proposed BMPs.

West Valley Creek and Broad Run

The total required sediment load reduction (10% of 1,622,736 lbs/yr) for West Valley Creek and Broad Run is 162,274 lbs/yr. The proposed BMPs will remove 167,372 lbs/year or 5099 lbs/yr greater than required and therefore the design meets the permit requirements for this watershed. This excess may be applied to the next required reduction when required.

The coordinates for the existing BMPs are as follows:

Grid	OutfallID	Type	Lat	Long
5D	093.1	Wetpond	40.017637	-75.623776
2B	142.2	Wetlands	40.025129	-75.656867
6C	149.1	Detention	40.009401	-75.620068
3G	157.2	Detention	40.040319	-75.598759
5C	215.1	Wetpond	40.016698	-75.629169
6D	217.2	Detention	40.010399	-75.61266
6D	217.1	Infiltration	40.010705	-75.611705
4G	275.3	Detention	40.037645	-75.597465
4G	275.1	Infiltration	40.038617	-75.595709
4G	275.2	Infiltration	40.038535	-75.598176

East Branch Chester Creek and Ridley Creek

The required sediment load reduction (10% of 92,456 lbs/yr) for East Branch Chester Creek and Ridley Creek is 9,246 lbs/yr. The proposed BMPs will remove 10,084 lbs/year or 839 lbs/yr greater than required and therefore the design meets the permit requirements for this watershed. This excess may be applied to the next required reduction when required. The Township will reduce sediment by 10% by installing four (4) rain gardens (bioretention), two (2) each within each watershed. The total load reduction exceeds the required amount by 839 lbs/yr.

Note: All rain gardens are "Bioretentin – Raingarden (C/D soils w/ underdrain)" per the PaDEP Effectiveness Values chart and have a 55% sediment reduction.

SECTION F – IDENTIFY FUNDING MECHANISM(S)

Background

West Whiteland Township realizes the importance to establish a designed infrastructure to reduce pollutant being transmitted to our waterways and, even more importantly, properly plan for the installation of such facilities, including how to fund the costs of these installations. A proper sequencing plan of installations and a proactive funding plan increase the potential for success to accomplish the goal of reducing the pollutants in the waterway.

The Township consists of roughly 12.92 square miles. As of 2010, the population was just under 18,300 people. The Township is a Second-Class Township governed by a three-member Board of Supervisors. There is approximately 67 miles of roadway maintained by the Township. The Township's revenues are principally the Earned Income Tax. Presently, the Township has not created a storm sewer user fee to pay for the implementation and maintenance of the BMPs to be installed as part of the Pollutant Reduction Plan. The present plan is to cover these costs through the General Fund of the Township. However, the Township will consider other options should they become available (e.g. grants, volunteers, etc.) or if they deem other methods (e.g. storm sewer user fee, etc.) to be a better means to fund these projects.

Without grants or other financial assistance, the Township's anticipated cost to construct the bioswales within the West Valley Creek watershed is $405,000. The anticipated cost to construct the rain gardens in the East Branch Chester Creek/Ridley Creek is $245,000 for a total of $645,000. The Township will likely own and maintain the bioswales and rain gardens. They each will be maintained in accordance with proper BMP maintenance protocols. The estimated annual maintenance cost for the bioswales is approximately $1,000 each ($4,000) and for the rain gardens is approximately $1,500 ($6,000).

The proposed BMPs will be located on Home Owners Association property, Township property, and one private property. The Township has spoken to the HOAs and has verbal consent to proceed with the projects but will enter a formal agreement before proceeding with the projects. The one on private property the Township has spoken to the owner to purchase the property.

Goal

The goal of the Township is to lay out a specific set of criteria to install and fund the Best Management Practice sites to achieve measurable milestones and goals. This set of specific criteria shall be kept simple for continuity purposes yet detailed enough to provide accountability by the Township. The program shall be arranged to allow flexibility in the event of extenuating circumstances taking place outside of the West Whiteland Township Pollutant Reduction Plan that may conflict with or impact the ability to implement this plan.

Strategies to Achieve Measurable Goals

The MS4 Permit period will contains five years. This allows time for the Township to plan, prepare, and arrange funding to complete the required BMP facilities within the five-year period. Obviously, due to the nature of the work, these BMP facilities will need to be constructed during suitable weather conditions free from freezing temperatures.

Timing of Projects

Each of the BMP facility projects will likely be installed in separate years to minimize the overall financial burden to the Township in any given year. However, all BMPs will be installed and functioning by the end of the permit period.

No BMP facilities will be installed in the first year of the permit cycle. This will allow the Township to properly prepare for the projects, complete topographical surveys, and adjust for any design modifications. This one-year period will also allow the Township to allocate funding for these projects.

Although it is likely that two, three or more facilities in any given year will be constructed, West Whiteland Township is only committing to have the facilities required to meet the load reduction requirements constructed and functioning by the end of the permit period, 5 years from the date it is issued.

Method of Installation

Where feasible, the construction of the BMPs will be performed by Township staff. If the construction exceeds the capability of the Public Works staff, West Whiteland Township will publicly bid the projects and SSM or in house staff will oversee the construction.

Funding

All material, labor and equipment costs associated with the installation of these facilities will be paid for through West Whiteland Township's General Fund. Presently, West Whiteland Township has not created a Storm Sewer User Fee. If it is determined that the funding source must be altered, that determination will be made depending upon the most prudent course of action in implementing the PRP.

SECTION G – IDENTIFY RESPONSIBLE PARTIES FOR OPERATION AND MAINTENANCE (O&M) OF BMPS

Once the BMPs are completed, routine maintenance will likely be completed by the Township. However, should any maintenance or repairs extend beyond their capabilities, the Township will hire a contractor that is capable of providing the appropriate services. However, it is possible that some of the BMPs may be maintained by existing Home Owners Associations. If this were to occur, the Township would require that they enter into a maintenance agreement with the Township.

SPECIFIC O&M REQUIREMENTS

Wet Ponds

Wet Ponds should be inspected once per year. Inspections should access the vegetation, erosion, flow channelization, bank stability, inlet/outlet conditions, embankment, and sediment/debris accumulation. The pond drain should also be inspected. Problems should be corrected as soon as possible. Vegetation should maintain at least an 85 percent cover of the emergent vegetation zone and buffer area. Annual harvesting of vegetation may increase the nutrient removal of WPs; if performed it should generally be done in the summer so that there is adequate regrowth before winter. Care should be taken to minimize disturbance, especially of bottom sediments, during harvesting. The potential disturbance from harvesting may outweigh its benefits unless the WP receives a particularly high nutrient load or discharges to a nutrient sensitive waterbody. Sediment should be removed from the forebay before it occupies 50 percent of the forebay, typically every 5 to 10 years.

Detention Basins

Detention basins should be inspected once per year. Inspections should access the vegetation, erosion, flow channelization, bank stability, inlet/outlet conditions, embankment, and sediment/debris accumulation. The pond outlet should also be inspected. Problems should be corrected as soon as possible. Vegetation should maintain at least an 85 percent cover. Sediment accumulation should be monitored during yearly inspections. These inspections may serve as a means to determine how often sediment must be removed. The embankment shall be inspected for vectors and unwanted vegetation (trees & brush) and remediated as soon as possible.

Infiltration Beds

Maintenance activities required for the subsurface bed are similar to those of any infiltration system and focus on regular sediment and debris removal. The following represents the recommended maintenance efforts:

- All Catch Basins and Inlets should be inspected and cleaned at least 2 times per year.
- The overlying vegetation of Subsurface Infiltration features should be maintained in good condition, and any bare spots revegetated as soon as possible.

- Vehicular access on Subsurface Infiltration areas should be prohibited, and care should be taken to avoid excessive compaction by mowers. If access is needed, use of permeable, turf reinforcement should be considered.
- For those beds that include porous paving, the porous paving should not be sealed and it should be cleaned with a vacuum sweeper on a regular basis.

Bioswales

Compared to other stormwater management measures, the required upkeep of vegetated swales is relatively low. In general, maintenance strategies for swales focus on sustaining the hydraulic and pollutant removal efficiency of the channel, as well as maintaining a dense vegetative cover. Experience has proven that proper maintenance activities ensure the functionality of vegetated swales for many years. The following schedule of inspection and maintenance activities is recommended:

Maintenance activities to be done annually and within 48 hours after every major storm event (> 1 inch rainfall depth):

- Inspect and correct erosion problems, damage to vegetation, and sediment and debris accumulation (address when > 3 inches at any spot or covering vegetation)
- Inspect vegetation on side slopes for erosion and formation of rills or gullies, correct as needed
- Inspect for pools of standing water; dewater and discharge to an approved location and restore to design grade
- Mow and trim vegetation to ensure safety, aesthetics, proper swale operation, or to suppress weeds and invasive vegetation; dispose of cuttings in a local composting facility; mow only when swale is dry to avoid rutting
- Inspect for litter; remove prior to mowing
- Inspect for uniformity in cross-section and longitudinal slope, correct as needed
- Inspect swale inlet (curb cuts, pipes, etc.) and outlet for signs of erosion or blockage, correct as needed

Maintenance activities to be done as needed:

- Plant alternative grass species in the event of unsuccessful establishment
- Plant alternative grass species in the event of unsuccessful establishment
- Reseed bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming
- Rototill and replant swale if draw down time is more than 48 hours
- Inspect and correct check dams when signs of altered water flow (channelization, obstructions, erosion, etc.) are identified
- Water during dry periods, fertilize, and apply pesticide only when absolutely necessary

More intensive swales (i.e. more substantial vegetation, check dams, etc.) may warrant more intensive maintenance duties. Winter conditions also necessitate additional maintenance concerns, which include the following:

- Inspect swale immediately after the spring melt, remove residuals (e.g. sand) and replace damaged vegetation without disturbing remaining vegetation.
- If roadside or parking lot runoff is directed to the swale, mulching and/or soil aeration/manipulation may be required in the spring to restore soil structure and moisture capacity and to reduce the impacts of deicing agents.

- Use nontoxic, organic deicing agents, applied either as blended, magnesium chloride-based liquid products or as pretreated salt.
- Use salt-tolerant vegetation in swales.

Rain Gardens (Bio-retention)

- Properly designed and installed Bioretention areas require some regular maintenance.
- While vegetation is being established, pruning and weeding may be required.
- Detritus may also need to be removed Perennial plantings may be cut down at the end of the growing season.
- Mulch should be re-spread when erosion is evident and be replenished as needed. Once every 2 to 3 years the entire mulch may require replacement.
- Bio-retention areas should be inspected at least two times per year for sediment buildup, erosion, vegetative conditions, etc.
- During periods of extended drought, Bioretention areas may require watering.
- Trees and shrubs should be inspected twice per year to evaluate health.

SECTION H – INTERGOVERNMENTAL AGREEMENT(S)

None

SECTION I – EXISTING BMP BACKGROUND INFORMATION

Grid	OutfallID	Type	Lat	Long
5D	093.1	Wetpond	40.017637	-75.623776
5C	215.1	Wetpond	40.016698	-75.629169

These wetponds are located in the Whiteland Woods Development. As noted on the attached documents, the project planning started around the spring of 1998 and construction was completed circa the spring of 2005. As shown on the following documents, the plans refer to "the permittee." An NPDES permit was required for this project. Both basins were constructed with an aquatic bench and the wet pond storage area is 4'-6' deep. Since they were built, the ponds have been maintained by the HOA and they continue to serve their function.

Grid	OutfallID	Type	Lat	Long
2B	142.2	Wetlands	40.025129	-75.656867

This wetland is located in the Woodledge at Whitford Hills Development. As noted on the following documents, the project planning started around the summer of 2005 and construction was completed circa the fall of 2011. The design of the detention basin included a wetland within the basin. As was customary at the time, the plans were required to contain a note that the project required an NPDES permit. Since the wetlands have been built, they have been maintained by the HOA and they continue to serve their function.

Grid	OutfallID	Type	Lat	Long
6C	149.1	Detention	40.009401	-75.620068

This detention basin is located on the Township recreation park known as Boot Road Park. The basin was completed circa 2006-2007. The Township maintains it and it continues to serve its function as a detention basin.

Grid	OutfallID	Type	Lat	Long
6D	217.2	Detention	40.010399	-75.61266
6D	217.1	Infiltration	40.010705	-75.611705

These facilities are located at the "Extra Storage Space" formerly known as Lexington Limited. Construction started in 2002 and was completed by 2004. As noted on the following documents, there is

declaration of maintenance in which the owner is required to maintain the facilities. The facilities consist of a standard infiltration trench and detention basin. Since they were built, the facilities have been maintained by the owner and they continue to serve their function.

Grid	OutfallID	Type	Lat	Long
3G	157.2	Detention	40.040319	-75.598759
4G	275.3	Detention	40.037645	-75.597465
4G	275.1	Infiltration	40.038617	-75.595709
4G	275.2	Infiltration	40.038535	-75.598176

These facilities are located on a project known as the Valley Creek Corporate Center. As shown on the following documents, an NPDES permit was required. The facilities consist of infiltration beds located under parking lots. The infiltration bed(s) at 275.1 were constructed with porous paving in the parking lot. However, the design includes a means for runoff to enter the beds even if said paving was sealed off. These infiltration beds then flow into the detention basin of 275.3. The detention basin at 157.2 is a conventional detention basin. Since they were built, the facilities have been maintained by the owner and they continue to serve their function.

SPOTTS | STEVENS | MCCOY

ssmgroup.com

READING
1047 North Park Road
Reading PA 19610
P: 610.621.2000 | F: 610.621.2001

LEHIGH VALLEY
Roma Corporate Center
1605 North Cedar Crest Boulevard; Suite 106
Allentown PA 18104
P. 610.849.9700 | F: 610.621.2001

LANCASTER
701 Creekside Lane
Lititz PA 17543
P. 717-568-2678 | F: 610.621.2001

WEST CHESTER
101 East Evans Street, Suite #2
West Chester PA 19380

GENERAL NOTES AND SPECIFICATIONS

1. AT LEAST 20 DAYS PRIOR TO COMMENCEMENT AND UPON COMPLETION OF WORK. THE FOLLOWING MUST BE NOTIFIED:

CHESTER COUNTY CONSERVATION DISTRICT (CCCD)
GOVERNMENT SERVICES CENTER, SUITE 240
601 WESTTOWN ROAD
P.O. BOX 2747
WEST CHESTER, PA 19380-0990
(610)436-9182
(610)696-5126
(610)696-4659 FAX

THE PROJECT SITE SHALL AT ALL TIMES BE AVAILABLE FOR INSPECTION BY AUTHORIZED OFFICERS AND EMPLOYEES OF THE ABOVE AGENCY.

2. A PRECONSTRUCTION MEETING IS REQUIRED AT THE SITE BETWEEN THE CHESTER COUNTY CONSERVATION DISTRICT, THE PROJECT ENGINEER, THE TOWNSHIP ENGINEER AND ANY PERTINENT FIELD PERSONNEL. THIS MEETING IS TO BE HELD AT LEAST ON WEEK PRIOR TO THE START OF ANY SITE EARTH DISTURBANCE.

3. THESE PLANS DEPICT THE DEVELOPMENT OF 439 UNITS IN 5 PHASES. IF ADDITIONAL WORK IS DONE, ADDITIONAL CONTROL MEASURES MAY BE REQUIRED AND APPROVAL MUST BE OBTAINED FROM THE CHESTER COUNTY CONSERVATION DISTRICT.

4. THESE PLANS PROPOSE DEVELOPMENT IN FIVE PHASES.

PHASE 1 – DEVELOPMENT OF 160 UNITS
CONSTRUCTION OF DETENTION BASINS 1, 2, 3 & 4
CONSTRUCTION OF PARK
CONSTRUCTION OF POOL / RECREATION AREA

PHASE 2 – DEVELOPMENT OF 70 UNITS

PHASE 3 – DEVELOPMENT OF 95 UNITS

PHASE 4 – DEVELOPMENT OF 50 UNITS

PHASE 5 – DEVELOPMENT OF 64 UNITS

5. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN A MANNER SUCH THAT ALL EROSION AND AIR/WATER POLLUTION IS MINIMIZED. STATE AND LOCAL LAWS CONCERNING ABATEMENT SHALL BE FOLLOWED.

6. SHOULD UNFORESEEN EROSIVE CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AND STREAMS IN ACCORDANCE WITH PADOT 408, SECTION 845. STOCKPILES OF CRUSHED STONE AND MULCHES SHALL BE MAINTAINED AT THE SITE IN READINESS TO DEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OF EROSION.

7. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART I, DER, SUP-PART C, PROTECTION OF NATURAL RESOURCES, ARTICLE II, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.

8. THE PERMITTEE SHALL NOTIFY THE CHESTER COUNTY CONSERVATION DISTRICT PRIOR TO ANY CESSATION IN EARTHMOVING ACTIVITIES OF MORE THAN 20 DAYS.

9. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE OR OF STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE ALL SUCH PROBLEMS.

10. UNTIL THE SITE IS STABILIZED ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH STORM EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY.

11. EROSION AND SEDIMENTATION CONTROLS MUST BE CONSTRUCTED, FUNCTIONAL AND STABILIZED BEFORE GENERAL SITE DISTURBANCE WITHIN THE TRIBUTARY AREAS OF THOSE CONTROLS. RUNOFF FROM DISTURBED AREAS MUST PASS THROUGH A SEDIMENT REMOVAL OR RETENTION FACILITY BEFORE LEAVING THE SITE.

12. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED FOR MORE THAN 20 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING MIXTURE AND MULCH. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE SEEDED AND MULCHED WITH A PERMANENT SEED MIXTURE AND MULCH.

13. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST BE STABILIZED.

14. THE PERMITTEE MUST DEVELOP, AND HAVE APPROVED BY THE CHESTER COUNTY CONSERVATION DISTRICT, A SEPARATE EROSION AND SEDIMENTATION CONTROL PLAN FOR EACH SPOIL, BORROW OR OTHER WORK AREA NOT DETAILED IN THE APPROVED PLAN, WHETHER LOCATED WITHIN OR OUTSIDE OF THE CONSTRUCTION LIMITS.

15. A COPY OF THE EROSION AND SEDIMENTATION CONTROL PLANS MUST BE POSTED AT THE CONSTRUCTION SITE IN ACCORDANCE WITH STATE LAW.

16. THE PERMITTEE WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROL MEASURES AND RELATED ITEMS.

17. EROSION CONTROL DEVICES SHALL BE INSPECTED WEEKLY AND IMMEDIATELY FOLLOWING EACH RAINFALL EVENT BY THE APPLICANT OR HIS DESIGNER. DURING OR IMMEDIATELY FOLLOWING EACH INSPECTION, EROSION CONTROLS SHALL BE MAINTAINED, REPAIRED, OR REPLACED AS NECESSARY TO ENSURE THAT THE SAID DEVICES CONTINUOUSLY FUNCTION AS DESIGNED.

18. ON INDIVIDUAL UNITS WHERE FLOWS CAN BE HANDLED BY SILT FENCES, AN INDIVIDUAL SEDIMENT TRAP WILL NOT BE NECESSARY. HOWEVER, IF ANY TIME THE SILT FENCE FAILS, THE TOWNSHIP MAY REQUIRE SEDIMENT TRAPS TO BE INSTALLED BY THE APPLICANT IF NOT IN CONFLICT WITH APPROVED PLANS.

19. PROTECTION OF EXISTING TREES AND SHRUBS SHALL BE TAKEN BY THE CONTRACTOR TO ELIMINATE UNNECESSARY DAMAGE. THE CONTRACTOR SHALL MAKE ALL REASONABLE EFFORTS TO PRESERVE TREES 8" OR GREATER DBH.

SEQUENCE OF CONSTRUCTION

PHASE 1

1. WETLANDS AND LIMIT OF CLEARING MUST BE STAKED OUT PRIOR TO ANY EARTH MOVING ACTIVITIES.

2. INSTALL SCE-1 @ EXISTING DRIVEWAY FROM ROUTE 100 AND SCE-3 @ BURKE ROAD.

3. CLEAR ALL ROADWAY AND UNIT AREAS WITHOUT STUMP REMOVAL OR ROOT RAKING.

4. INSTALL SILT FENCE ON DOWNHILL SIDE OF ANY DISTURBED AREA PRIOR TO DISTURBANCE, AS INDICATED ON PLAN.

6. CONSTRUCT & STABILIZE:
   A. SEDIMENT BASIN 1
   B. SEDIMENT BASIN 2
   C. SEDIMENT TRAP 1

7. CONTRUCT AND STABILIZE:
   A. TEMPORARY SWALE TS-1, INCLUDING ROCK FILTER/DAMS.
   B. TEMPORARY GRADED DIVERSIONS ACROSS WHITELAND WOODS BOULEVARD, INTO SEDIMENT BASIN 2 AND SEDIMENT TRAP 1.
   C. TEMPORARY GRADED DIVERSION INTO SEDIMENT BASIN 2 (NORTHWEST CORNER OF BASIN).

8. CONSTRUCT CULVERT UNDER WHITELAND WOODS BOULEVARD AT STA. 1+50 PER WHITELAND WOODS BOULEVARD CULVERT CONSTRUCTION SEQUENCE.

9. INSTALL STORM SEWERS THAT WILL DIVERT RUNOFF TO SEDIMENT BASIN 2 AND TO SEDIMENT TRAP 1.

STRUCTURES 219 – 218 – 217 – 216 – 215 – EW6
STRUCTURES 238 – 237 – 236 – 235 – 234 – EW7
STRUCTURES 302 – 301 – EW9

10. GRUB & ROUGH GRADE WHITELAND WOODS BOULEVARD ENTIRE LENGTH. BORROW MATERIAL TO BE USED TO COMPLETE TRAP & BASINS. INSTALL CARTWAY DIVERSION BERMS ACROSS WHITELAND WOODS BOULEVARD.

11. CONSTRUCT A 10' WIDE BY 300' LONG PAVED DRIVEWAY WITH TEMPORARY PARKING FOR SUBCONTRACTOR ACCESS AND USE. THIS STAGING AREA IS NOT TO BE LOCATED IN AN AREA THAT WOULD OTHERWISE BE UNDISTURBED. PROVIDE A TIRE CLEANER WITH WATER AVAILABLE TO WASH CONSTRUCTION VEHICLES BEFORE LEAVING THE SITE. (REQUIRED TO REQUEST BUILDING PERMITS PRIOR TO CONSTRUCTION OF ROADS)

12. CONSTRUCT UNITS FOR MODEL HOMES USING TYPICAL UNIT CONSTRUCTION SEQUENCE.

13. CLEAR, GRUB, ROUGH GRADE ALL ROADS AND UNIT AREAS. STABILIZE AREAS WHICH WILL REMAIN FOR MORE THAN 20 DAYS WITH A TEMPORARY SEEDING MIXTURE.

INDIVIDUAL HOUSE CONSTRUCTION CAN BEGIN WHEN UNITS ARE SUB-GRADED WITHIN THE AREAS INDICATED BELOW IN ITEM 14.

ALL UNITS SHALL BE TEMPORARILY SEEDED.

14. INSTALL UTILITIES, CURB & BINDER COURSE & STABILIZE THE FOLLOWING ROADS & UNIT AREAS:

   A. WHITELAND WOODS BOULEVARD THE ENTIRE LENGTH
   B. EMILY WAY THE ENTIRE LENGTH
   C. MEGHAN COURT STA. 0 + 00 TO STA. 3 + 40
   D. KRISTINE COURT STA. 0 + 00 TO STA. 6 + 44
   E. CHRISTOPHER DRIVE STA. 0 + 00 TO STA. 6 + 00
   F. JONATHAN COURT STA. 0 + 00 TO STA. 8 + 78
   G. JACQUELYN DRIVE STA. 0 + 00 TO STA. 15 + 70
   H. POOL / RECREATION AREA

INSTALL CARTWAY DIVERSION BERMS FOR THESE STREETS AS SHOWN ON THE PLAN.

STABILIZE TOPSOIL PILES WHICH WILL REMAIN FOR MORE THAN 20 DAYS WITH A TEMPORARY SEEDING MIXTURE.

15. INSTALL THE FOLLOWING STABILIZED CONSTRUCTION ENTRANCES TO ACCESS AREAS FOR FUTURE DEVELOPMENT:

   A. SCE-4 AT STA. 8 + 78 ON JONATHAN COURT,
   B. SCE-6 AT STA. 6 + 44 ON KRISTINE COURT,
   C. SCE-7 AT STA. 3 + 40 ON MEGHAN COURT,
   D. SCE-8 AT STA. 6 + 00 ON CHRISTOPHER DRIVE,
   E. SCE-9 AT STA. 15 + 70 ON JACQUELYN DRIVE,
   F. SCE-10 AT STA. 21 + 00 ON CHRISTOPHER DRIVE,
   G. SCE-11 AT STA. 27 + 80 ON JACQUELYN DRIVE.

16. CONSTRUCT A 10' WIDE ONE LANE STONE ACCESS ROAD ON JACQUELYN DRIVE FROM STA. 15+70 TO THE END OF JACQUELYN DRIVE AT STA. 28+00 (AT WHITELAND WOODS BOULEVARD).

17. THIS STEP PERTAINS TO THE PARK AREA.
   A. LIMIT OF CLEARING MUST BE STAKED OUT PRIOR TO ANY EARTH MOVING ACTIVITIES.

   B. INSTALL SCE-5 @ BOOT ROAD x DRIVEWAY.

   C. CLEAR WORK AREA WITHOUT STUMP REMOVAL OR ROOT RAKING.

   D. INSTALL SILT FENCE ON DOWNHILL SIDE OF ANY DISTURBED AREA AS INDICATED ON PLAN.

   E. CONSTRUCT & STABILIZE:
      1. SEDIMENT BASIN 3
      2. STORM SEWER TO SEDIMENT BASIN 3

   F. GRUB, ROUGH GRADE, INSTALL UTILITIES, REPLACE TOPSOIL, STABILIZE THE DRIVEWAY & PARKING AREA.

STABILIZE TOPSOIL PILES WHICH WILL REMAIN FOR MORE THAN 20 DAYS WITH A TEMPORARY SEEDING MIXTURE.

LAWN AREAS WILL RECEIVE FINAL SEEDING MIXTURE AFTER FINE GRADING.

18. REMAINING PHASES CAN BE CONSTRUCTED SIMULTANEOUSLY AFTER SEDIMENT BASINS ARE OPERATIONAL.

19. THE FOLLOWING CONTROLS CAN BE REMOVED AFTER THE TRIBUTARY AREAS ARE STABILIZED.

   A. SEDIMENT TRAP 1 AFTER VEGETATION IS ESTABLISHED IN CONTRIBUTING AREA & STORM DRAINAGE SYSTEM FROM INLET 309 TO EW9 IS IN OPERATION.
   B. ASPHALT DIVERSION BERM CROSSING WHITELAND WOODS BLVD AT STA. 27+90 WHEN STORM DRAINAGE SYSTEM FROM INLET 309 TO EW9 IS IN OPERATION & BERMS AT INLETS 302 & 301 ARE INSTALLED.
   C. SEDIMENT BASIN 3 WHEN LITTLE LEAGUE FIELDS ARE STABILIZED.
   D. SILT FENCE EXCEPT WHEN FENCE IS USED FOR INDIVIDUAL UNIT CONTROLS.
   E. CARTWAY DIVERSION BERMS WHEN TOP COURSE OF PAVING IS CONSTRUCTED.

STABILIZE THE AFFECTED AREAS DISTURBED BY THE REMOVAL OF THE CONTROLS.

PHASES 2 THRU 5 TYPICAL SEQUENCE

1. STABILIZED CONSTRUCTION ENTRANCES EXIST FROM PHASE 1.

2. INDIVIDUAL HOUSE CONSTRUCTION CAN BEGIN WHEN AREA IS SUB-GRADED WITHIN THE AREAS INDICATED BELOW FOR EACH PHASE.

ALL UNITS SHALL BE TEMPORARILY SEEDED.

INSTALL UTILITIES, CURB AND BINDER COURSE AND STABILIZE THE ROADS AND UNIT AREAS

SWALES MUST REMAIN FUNCTIONAL DURING ROUGH GRADING FOR UNITS.

STABILIZE TOPSOIL PILES WHICH WILL REMAIN FOR MORE THAN 20 DAYS WITH A TEMPORARY SEEDING MIXTURE.

ALL INSTALLED STORM SEWERS SHALL BE FUNCTIONAL.

3. STEPS 1 AND 2 MUST BE COMPLETED, EXCEPT INDIVIDUAL DWELLING CONSTRUCTION, BEFORE PROCEEDING WITH THE FOLLOWING ACTIVITIES.

4. THE FOLLOWING CONTROLS CAN BE REMOVED AFTER THE TRIBUTARY AREAS ARE STABILIZED.

   A. SILT FENCE EXCEPT WHEN FENCE IS USED FOR UNIT CONTROLS.

STABILIZE THE AFFECTED AREAS DISTRIBUTED BY THE REMOVAL OF THE CONTROLS.

PHASE 2 (SEE TYPICAL SEQUENCE ABOVE)

1. STABILIZED CONSTRUCTION ENTRANCES SCE-9 AND SCE-11 ON JACQUELYN DRIVE EXIST FROM PHASE 1.

2. ROAD AND UNIT AREAS:

   A. JACQUELYN DRIVE STA. 15 + 70 TO END.

PHASE 3 (SEE TYPICAL SEQUENCE ABOVE)

1. STABILIZED CONSTRUCTION ENTRANCES SCE-8 AND SCE-10 ON CHRISTOPHER DRIVE EXIST FROM PHASE 1.

2. ROAD & UNIT AREAS:

   A. CHRISTOPHER DRIVE STA. 6 + 00 TO END

PHASE 4 (SEE TYPICAL SEQUENCE ABOVE)

1. STABILIZED CONSTRUCTION ENTRANCE SCE-7 ON MEGHAN COURT EXISTS FROM PHASE 1.

2. ROAD & UNIT AREAS:

   A. MEGHAN COURT STA. 3 + 40 TO END.

PHASE 5 (SEE TYPICAL SEQUENCE ABOVE)

1. STABILIZED CONSTRUCTION ENTRANCES SCE-4 (JONATHAN COURT) AND SCE-6 (KRISTINE COURT) EXIST FROM PHASE 1.

2. ROAD & UNIT AREAS:

   A. JONATHAN COURT STA. 8 + 78 TO END.
   B. KRISTINE COURT STA. 6 + 44 TO END.

WHITELAND WOODS BOULEVARD CULVERT CONSTRUCTION SEQUENCE (SEE DETAIL SHEET 92 of 109)

1. INSTALL PROPOSED TWIN 60" RCP WITHOUT DISTURBING THE EXISTING 66" RCP.

2. INSERT TEMPORARY 36" ADS PIPE INTO DOWNSTREAM END OF EXISTING 66" RCP. DOWNSTREAM END OF TEMPORARY PIPE SHOULD BE BEYOND LIMITS OF ROCK LINED SWALE PS-R2. SAND BAG OUTLET OF EXISTING 66" RCP TO RESTRICT FLOW TO ONLY THE TEMPORARY PIPE.

3. EXCAVATE AND CONSTRUCT ROCK LINED SWALES PS-R1 AND PS-R2, EXCEPT FOR THE PORTION IMMEDIATELY AROUND THE EXISTING 66" RCP.

4. EXCAVATE AND REMOVE PORTION OF EXISTING 18" RCP AND INSTALL ENDWALL EW16. INSTALL TEMPORARY CLEAN WATER DIVERSION PUMP. SANDBAG AS NECESSARY DOWNSTREAM OF ENDWALL EW16.

5. TEMPORARILY SAND BAG UPSTREAM OF ENTRANCE OF EXISTING 5'x8' BOX CULVERT TO RESTRICT WATER FROM ENTERING CULVERT AND EXISTING 66" RCP.

6. REMOVE EXISTING 66" RCP UPSTREAM OF ENDWALL EW13 AND DOWNSTREAM OF EW14. REMOVE TEMPORARY 36" ADS PIPE AT END OF EXISTING 66" RCP.

7. CONSTRUCT ENDWALLS EW13 AND EW14 AND COMPLETE CONSTRUCTION OF ROCK SWALES PS-R1 AND PS-R2. AT END OF EACH WORK DAY (TO RESTORE FLOW TO THE STREAM):
   A. INSTALL TEMPORARY 36" ADS PIPE BETWEEN ENDWALL EW13 AND EXISTING 5'x8' BOX CULVERT. TEMPORARY 36" ADS PIPE SHOULD CONNECT TO MIDDLE NEW 60" RCP.
   B. INSTALL TEMPORARY 36" ADS PIPE DOWNSTREAM OF ENDWALL EW14 TO THE LIMIT OF ROCK SWALE PS-R2. TEMPORARY 36" ADS PIPE SHOULD CONNECT TO MIDDLE NEW 60" RCP.
   C. REMOVE SAND BAGS AT ENTRANCE TO EXISTING 5'x8' BOX CULVERT.

REMOVE TEMPORARY 36" ADS PIPES AND REINSTALL SAND BAGS PRIOR TO NEXT DAY START-UP.

8. UPON COMPLETION OF ENDWALLS EW13 AND EW14 AND ROCK SWALES PS-R1 AND PS-R2, REMOVE ALL SAND BAGS, TEMPORARY 36" ADS PIPES, AND TEMPORARY CLEAN WATER DIVERSION PUMP.

TYPICAL SEDIMENT BASIN (AND TRAP) CONSTRUCTION SEQUENCE

1. STAKE OUT LIMITS OF BASIN CONSTRUCTION AND INSTALL SILT FENCE DOWNHILL OF PROPOSED CONSTRUCTION AREAS.

2. CLEAR AND GRUB BASIN AREAS.

3. CONSTRUCT BASIN AND ALL RELATED OUTFALL STRUCTURES AND STABILIZE THE BASIN.

TYPICAL SEDIMENT BASIN (OR TRAP) REMOVAL SEQUENCE

NOTE: PRIOR TO BASIN OR TRAP REMOVAL ALL EARTH DISTURBANCE MUST BE COMPLETE AND ALL AREAS MUST BE STABILIZED WITHIN THE TRIBUTARY AREAS OF THE BASIN (OR TRAP) TO BE REMOVED UNLESS ALTERNATIVE CONTROLS ARE IN PLACE.

1. DEWATER THE BASIN PER THE PUMPED WATER SILTATION SUMP DETAIL OR PUMPED WATER SILTATION BASIN DETAIL.

2. REMOVE ACCUMULATED SEDIMENT. MIX WITH UNIT TOPSOIL AND STABILIZE.

3. REGRADE THE AREA TO PROPOSED FINAL GRADES. EMERGENCY SPILLWAY TO BE CONSTRUCTED AND STABILIZED.

4. MODIFY OUTLET STRUCTURE IF NECESSARY TO FINAL CONFIGURATION.

TYPICAL UTILITY CONSTRUCTION SEQUENCE

NOTE: UTILITY TRENCHING OPERATIONS SHALL BE LIMITED TO THE LENGTH OF PIPE THAT CAN BE INSTALLED, BACKFILLED AND STABILIZED IN ONE (1) WORKING DAY.

1. PLACE EXCAVATED MATERIAL ON THE UPHILL SIDE OF TRENCHES.

2. INSTALL UTILITIES AND STABILIZE BACKFILLED TRENCHES IMMEDIATELY.

3. BACKFILL TRENCHES WITH COMPACTED EARTH IN TOWNSHIP ROADS.

4. ADDITIONAL REQUIREMENTS FOR STORM SEWERS:

   A. IMMEDIATELY AFTER INLETS ARE PLACED AND STORM SEWERS ARE FUNCTIONAL, INSTALL CARTWAY DIVERSION BERMS-ROUGH CUT, AS SHOWN ON THE PLANS.

   B. IMMEDIATELY AFTER ROADWAY STONE BALLAST IS PLACED, INSTALL CARTWAY DIVERSION BERMS-STONE.

   C. IMMEDIATELY AFTER THE BINDER COURSE IS PLACED, INSTALL CARTWAY DIVERSION BERMS-PAVING.

   D. CARTWAY DIVERSIONS NEED NOT BE INSTALLED FOR SUMP INLETS.

TYPICAL UNIT CONSTRUCTION SEQUENCE – AS NEEDED

1. INSTALL SILT FENCE ON THE UNIT DOWNHILL SIDE OF PROPOSED CONSTRUCTION AREAS.

2. CLEAR, GRUB AND ROUGH GRADE FOR THE UNIT ENTRANCE AT THE DRIVEWAY. STABILIZE DRIVE AREAS IMMEDIATELY WITH THE DRIVEWAY STONE BASE.

3. CLEAR, GRUB AND ROUGH GRADE UNIT AREAS AND CONSTRUCT THE DWELLING.

4. FINE GRADE AND STABILIZE THE UNIT IN ACCORDANCE WITH THE SURFACE STABILIZATION CRITERIA FOR PERMANENT COVER.

5. AFTER THE UNIT IS COMPLETELY STABILIZED REMOVE SILT FENCE.

RE-STABILIZE AREAS DISTURBED DURING REMOVAL OF FENCING.

TYPICAL WETLANDS AND STREAM CROSSING SEQUENCE FOR ROADS AND UTILITIES

1. AT WETLANDS AND STREAM CROSSING, A 50 FOOT BUFFER SHALL BE MAINTAINED FROM THE EDGE OF THE WETLANDS OR THE STREAM BANK AS APPLICABLE, WITHIN BUFFERS, CLEARING, SOD DISTURBANCE, EXCAVATION AND EQUIPMENT TRAFFIC SHALL BE MINIMIZED. ACTIVITIES SUCH AS STACKING CUT LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE ACCOMPLISHED OUTSIDE OF BUFFERS.

TYPICAL EROSION CONTROL MEASURES FOR INSTALLATION OF UTILITIES ON STEEP SLOPES

1. PRIOR TO ANY EARTHMOVING ACTIVITIES, SILT FENCE AND/OR STONE OUTLET SEDIMENT TRAPS SHALL BE INSTALLED BELOW THE DISTURBED AREA.

2. BEGIN INSTALLATION OF PIPE, DISTURBING ONLY THE AREA REQUIRED FOR CONSTRUCTION. DO NOT EXCAVATE THE TRENCH FOR ANY MORE LENGTH THAN THE PIPE CAN BE INSTALLED AND BACKFILLED BY THE END OF THE DAY.

3. UPON INSTALLATION OF THE PIPE, THE TRENCH SHALL BE IMMEDIATELY BACKFILLED AND COMPACTED AS WORK PROGRESSES UP THE SLOPE, JUTE MATTING SHALL BE INSTALLED WITHIN 24 HOURS AS NEEDED, OVER THE DISTURBED AREA AND IMMEDIATELY SEEDED.

4. AS WORK UP THE SLOPES PROGRESSES, INSTALL FENCE ACROSS THE DISTURBED AREA FORTY FEET (40') ON-CENTER MINIMUM TO PREVENT SEDIMENT FLOW ACROSS AND GULLEYING OF THE DISTURBED AREA.

5. THE CONTRACTOR SHALL CONTINUALLY MONITOR THE EROSION CONTROL MEASURES UNTIL THE DISTURBED AREA IS STABILIZED. ANY DEFECTS SHALL BE IMMEDIATELY CORRECTED.

SURFACE STABILIZATION CRITERIA:

A. TEMPORARY COVER: FOR EXPOSURE PERIODS OF 20 DAYS TO 12 MONTHS.

1. SEED – MINIMUM 90% PURITY AND 85% GERMINATION.

FROM APRIL 15 TO OCTOBER 15:
50% WINTER RYE
50% ANNUAL RYE GRASS
AT 175 LBS/ACRE

FROM OCTOBER 15 TO APRIL 15:
ANNUAL RYE GRASS
AT 175 LBS/ACRE

2. FERTILIZER – STARTER QUALITY

12-20-20 1 TON/ACRE

3. LIME – AGRICULTURAL LIMESTONE

85% MINIMUM OF CARBONATES 3 TONS/ACRE

4. MULCH – ALL YEAR.

STRAW OR HAY: 3.0 TONS/ACRE
ALTERNATE – HYDRAULICALLY APPLIED
WOOD CELLULOSE FIBER: 320 #/1000-SF

B. PERMANENT COVER: (FOR EXPOSURE PERIODS OVER 12 MONTHS)
1. SEED– MINIMUM 90% PURITY AND 85% GERMINATION.

FROM APRIL 15 TO OCTOBER 15:

60% KENTUCKY BLUEGRASS
10% PENNFINE PERENNIAL RYEGRASS
30% PENNLAWN FESCUE
AT 4 lbs/1000 SQ. FT.

FROM OCTOBER 15 TO APRIL 15:
SEE TEMPORARY COVER. RESEED WITH PERMANENT COVER FROM APRIL 15 TO OCTOBER 15

2. FERTILIZER – STANDARD QUALITY

10-10-10 STARTER FERTILIZER 1 TON/ACRE

3. LIME – AGRICULTURAL LIMESTONE

85% MINIMUM OF CARBONATES 3.0 TONS/ACRE

4. MULCH – ALL YEAR

STRAW OR HAY: 3.0 TONS/ACRE
ALTERNATE – HYDRAULICALLY APPLIED
WOOD CELLULOSE FIBER: 320 #/1000-SF

5. SOD – BLUE TAG CERTIFIED SEED, STANDARD QUALITY
WEED FREE MIXED KENTUCKY BLUEGRASS 1" THICK, 12-16" WIDE, 4-5' LONG.

C. NOTES:

1. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED FOR MORE THAN 20 DAYS MUST BE SEEDED AND MULCHED OR HYDROSEEDED IMMEDIATELY. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING MIXTURE AND MULCH.

2. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE SEEDED AND MULCHED WITH A PERMANENT SEED MIXTURE AND MULCH.

3. MULCH OR HYDROSEED BASINS, TRAPS, SWALES AND STOCKPILES IMMEDIATELY AFTER SEEDING. ANCHORED NETTING IS TO BE INSTALLED OVER MULCH ON SLOPES 3:1 MULCH AND NETTING NEED NOT BE INSTALLED WITHIN SEDIMENT BASINS AND TRAPS BELOW CLEANOUT ELEVATIONS.

THIS SHEET IS PART OF AN AS-BUILT SET OF PLANS. HOWEVER THIS SHEET DOES NOT CONTAIN ANY AS-BUILT INFORMATION, AND THERE HAVE BEEN NO CHANGES MADE TO THIS PLAN SINCE THE LATEST RECORDED REVISION.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROGER M. FIELDS
LAND SURVEYOR
No. 037548-E

Roger M. Fields

DATE 5/23/05

ROGER M. FIELDS, P.L.S.
PA. LICENSE #037548-E

REV.	DESCRIPTION	DATE	DRAWN
9	REVISED PER TOWNSHIP ENGINEER'S COMMENTS	5/23/05	JCC
8	CLARIFIED SEQUENCE FOR PHASE 1, ITEMS 13 & 14, AND PHASES 2-5, ITEM 2	7/14/00	JHB
7	PER PADOT (5/28/99), CCCD (6/10/99) AND TBI REVIEWS	6/25/99	EJS
6	PER PADEP REVIEW LETTER DATED 3/26/99	4/28/99	JHB
5	PER C.C.C.D. REVIEW LETTER DATED 12/9/98	4/6/99	MJG
4	PER SSM (12/3/98), TCA (12/8/98), & TPD (12/29/98) REV. LTRS.	1/15/99	JBS
3	PER TWP ENGINEER LETTER DATED 11/9/98	11/23/98	JHB
2	PER TWP ENGINEER LETTER DATED 9/15/98	10/30/98	JHB
1	PER SSM, TWP, AND TBI REVIEW	5/22/98	JHB

EROSION & SEDIMENTATION CONTROL NOTES

WHITELAND WOODS

WEST WHITELAND TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

ESE
EASTERN STATES ENGINEERING, INC.
P.O. BOX 38
HUNTINGDON VALLEY, PA. 19006
215-914-2050

DESIGNED: D.W.F.	DRAWN: J.H.B.	CHECKED: J.H.B.
SCALE: N.T.S.	DATE: 7/24/97	DWG. NO.: ESNOTES

CONSTRUCTION OF DETENTION BASINS 1, 2, 3 & 4
CONSTRUCTION OF PARK
CONSTRUCTION OF POOL / RECREATION AREA

PHASE 2 – DEVELOPMENT OF 70 UNITS

PHASE 3 – DEVELOPMENT OF 95 UNITS

PHASE 4 – DEVELOPMENT OF 50 UNITS

PHASE 5 – DEVELOPMENT OF 64 UNITS

5. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN A MANNER SUCH THAT ALL EROSION AND AIR/WATER POLLUTION IS MINIMIZED. STATE AND LOCAL LAWS CONCERNING ABATEMENT SHALL BE FOLLOWED.

6. SHOULD UNFORESEEN EROSIVE CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AND STREAMS IN ACCORDANCE WITH PADOT 408, SECTION 845. STOCKPILES OF CRUSHED STONE AND MULCHES SHALL BE MAINTAINED AT THE SITE IN READINESS TO DEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OF EROSION.

7. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART I, DER, SUP–PART C, PROTECTION OF NATURAL RESOURCES, ARTICLE II, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.

8. THE PERMITTEE SHALL NOTIFY THE CHESTER COUNTY CONSERVATION DISTRICT PRIOR TO ANY CESSATION IN EARTHMOVING ACTIVITIES OF MORE THAN 20 DAYS.

9. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON–SITE FLOWS PRIOR TO DISCHARGE OR OF STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE ALL SUCH PROBLEMS.

10. UNTIL THE SITE IS STABILIZED ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH STORM EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY.

11. EROSION AND SEDIMENTATION CONTROLS MUST BE CONSTRUCTED, FUNCTIONAL AND STABILIZED BEFORE GENERAL SITE DISTURBANCE WITHIN THE TRIBUTARY AREAS OF THOSE CONTROLS. RUNOFF FROM DISTURBED AREAS MUST PASS THROUGH A SEDIMENT REMOVAL OR RETENTION FACILITY BEFORE LEAVING THE SITE.

12. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED FOR MORE THAN 20 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY. DURING NON–GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING MIXTURE AND MULCH. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE SEEDED AND MULCHED WITH A PERMANENT SEED MIXTURE AND MULCH.

13. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST BE STABILIZED.

14. THE PERMITTEE MUST DEVELOP, AND HAVE APPROVED BY THE CHESTER COUNTY CONSERVATION DISTRICT, A SEPARATE EROSION AND SEDIMENTATION CONTROL PLAN FOR EACH SPOIL, BORROW OR OTHER WORK AREA NOT DETAILED IN THE APPROVED PLAN, WHETHER LOCATED WITHIN OR OUTSIDE OF THE CONSTRUCTION LIMITS.

15. A COPY OF THE EROSION AND SEDIMENTATION CONTROL PLANS MUST BE POSTED AT THE CONSTRUCTION SITE IN ACCORDANCE WITH STATE LAW.

16. THE PERMITTEE WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROL MEASURES AND RELATED ITEMS.

17. EROSION CONTROL DEVICES SHALL BE INSPECTED WEEKLY AND IMMEDIATELY FOLLOWING EACH RAINFALL EVENT BY THE APPLICANT OR HIS DESIGNER. DURING OR IMMEDIATELY FOLLOWING EACH INSPECTION, EROSION CONTROLS SHALL BE MAINTAINED, REPAIRED, OR REPLACED AS NECESSARY TO ENSURE THAT THE SAID DEVICES CONTINUOUSLY FUNCTION AS DESIGNED.

18. ON INDIVIDUAL UNITS WHERE FLOWS CAN BE HANDLED BY SILT FENCES, AN INDIVIDUAL SEDIMENT TRAP WILL NOT BE NECESSARY. HOWEVER, IF ANY TIME THE SILT FENCE FAILS, THE TOWNSHIP MAY REQUIRE SEDIMENT TRAPS TO BE INSTALLED BY THE APPLICANT IF NOT IN CONFLICT WITH APPROVED PLANS.

19. PROTECTION OF EXISTING TREES AND SHRUBS SHALL BE TAKEN BY THE CONTRACTOR TO ELIMINATE UNNECESSARY DAMAGE. THE CONTRACTOR SHALL MAKE ALL REASONABLE EFFORTS TO PRESERVE TREES 8" OR GREATER DBH.

SEQUENCE OF CONSTRUCTION

PHASE 1

GENERAL NOTES:

1. THIS PROJECT IS WITHIN THE R-2 ZONING ON UPI NO. 41-04-25 WHICH IS CURRENTLY AN ACTIVE SINGLE FAMILY RESIDENTIAL LOT CONSISTING PRIMARILY OF WOODED AREAS.
2. ALL TRAFFIC CONTROL SIGNS SHALL HAVE TYPE 3 REFLECTIVE SHEETING.
3. THIS PLAN MAY HAVE BEEN INTENDED FOR AGENCY AND MUNICIPALITY REVIEW PURPOSES ONLY. USERS OF THIS PLAN ARE DIRECTED TO RESEARCH THE COUNTY CLERK'S OFFICE FOR SUBSEQUENT FILED COPIES OF THIS PLAN.
4. ALL EASEMENTS SHALL BE MARKED AT THEIR BEGINNING AND AT THEIR END WITH IRON PINS RON PINS SHALL BE PLACED IN THE GROUND AFTER FINAL GRADING IS COMPLETE AND SHOULD BE 1" ABOVE FINISHED GROUND.
5. THESE PLANS WERE PREPARED PER THE WEST WHITELAND TOWNSHIP SUBDIVISION/LAND DEVELOPMENT AND STORMWATER MANAGEMENT ORDINANCE DATED DECEMBER 8, 1998, AND THE WEST WHITELAND TOWNSHIP ZONING ORDINANCE DATED DECEMBER 8, 1998.
6. THIS SITE DOES NOT CONTAIN ANY EXISTING FLOODPLAIN, FLOODPLAIN SOILS, WETLANDS OR WATERS OF THE UNITED STATES.
7. ALL STREETS WITHIN THE SUBDIVISION ARE TO BE PUBLIC STREETS WHICH ARE DEDICATED TO AND BE MAINTAINED BY WEST WHITELAND TOWNSHIP.
8. THE PROPOSED SANITARY SEWER COLLECTION SYSTEM SHALL BE OFFERED FOR DEDICATION TO WEST WHITELAND TOWNSHIP.
9. MONUMENTS SHALL BE PLACED IN THE GROUND AFTER FINAL GRADING IS COMPLETED, AT A TIME SPECIFIED BY THE TOWNSHIP ENGINEER. THE MONUMENT SHALL BE CONCRETE, THE SIZE AND LENGTH AS MAY BE APPROVED BY THE TOWNSHIP ENGINEER.
10. AN NPDES PERMIT IS REQUIRED FOR THIS PROJECT FROM THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
12. THE DESIGNATED PASSIVE OPEN SPACE SHALL NOT BE FURTHER SUBDIVIDED AND IS TO BE OWNED AND MAINTAINED BY THE COMMUNITY HOMEOWNERS ASSOCIATION.
13. THE LOCATION OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS AND ACCURACY OF THE LOCATION AND DEPTH OF UNDERGROUND FACILITIES CANNOT BE GUARANTEED. THE CONTRACTOR MUST VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND FACILITIES PRIOR TO THE START OF CONSTRUCTION PER PENNSYLVANIA ACT 172 (FORMER ACT 287).
14. ALL STORM SEWER AND ROADS SHALL BE OWNED AND MAINTAINED BY WEST WHITELAND TOWNSHIP.
15. ALL EXISTING DEBRIS, SEPTIC TANKS AND WELLS LOCATED ON THE SITE SHALL BE REMOVED, HOWEVER, THE EXISTING HISTORIC HOUSE IS TO REMAIN.
16. UTILITY COMPANIES ARE GRANTED AN EASEMENT OVER, UNDER AND ACROSS A TEN (10) FOOT WIDE PORTION OF THE FRONT YARDS. THE EASEMENT AREA SHALL BE MEASURED FROM THE RIGHT-OF-WAY AND RUN THE ENTIRE LENGTH OF THE RIGHT-OF-WAY. THE EASEMENT IS GRANTED FOR THE PURPOSE OF PLACEMENT AND MAINTENANCE OF ELECTRIC TRANSFORMERS AND TELEPHONE AND CABLE TERMINAL BOXES, WHICH WILL BE ENGINEERED FOR SPECIFIC LOCATIONS ON LOTS PER THE UTILITY COMPANIES DESIGN CRITERIA AND WILL NOT BE RELOCATED.
17. REFER TO A PLAN ENTITLED "TABAS TRSCT: UPI 41-04-25 – MAP OF BOUNDARY SURVEY" REPARED BY EASTERN STATES ENGINEERING DATED FEBRUARY 25, 2005, LAST REVISED MAY 16, 2005.
18. THE DETENTION BASIN STRUCTURE IS TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
19. THE DETENTION BASIN MAINTENANCE EASEMENT IS TO BE USED BY THE TOWNSHIP FOR INSPECTIONS OF THE STORMWATER MANAGEMENT FACILITIES.
20. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WEST WHITELAND TOWNSHIP CODES AND SPECIFICATIONS AND PADOT 408 SPECIFICATIONS DATED DATED 2000 AND AS AMENDED, UNLESS OTHERWISE NOTED.
21. NO PLANTINGS, BUILDINGS, OR OTHER STRUCTURES MAY BE PLACED IN OR ON DRAINAGE, UTILITY AND ACCESS EASEMENTS BEYOND WAS IS SHOWN ON THE FINAL APPROVED PLANS.
22. TOPOGRAPHY AND EXISTING FEATURES SHOWN PER AERIAL PHOTOGRAMMETRY BASED ON A FLIGHT DATE OF 02-12-05 AND REPRESENTS CONDITONS ON THAT DATE. OBTAINED BY EASTERN STATES ENGINEERING, INC.
23. SIGHT TRIANGLE EASEMENTS ARE TO BE OWNED AND MAINTAINED BY THE PROPERTY OWNERS.
24. THE ULTIMATE RIGHT-OF-WAY ON ROUTE 30 (LINCOLN HIGHWAY) IS DEDICATED TO WEST WHITELAND TOWNSHIP.
25. ALL LOTS ARE TO BE SERVICED BY PUBLIC WATER AND SEWER.
26. PENNSYLVANIA ONE-CALL SYSTEM: 1-800-242-1776. EASTERN STATES ENGINEERING, INC., DOES NOT GUARANTEE THE VERTICAL OR HORIZONTAL LOCATION FROM THE EXISTING SUBSURFACE UTILITIES SHOWN HEREON, NOR DOES EASTERN STATES ENGINEERINGING, INC., GUARANTEE ALL SUBSURFACE UTILITIES AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF WORK AS REQUIRED BY ACT 38.
27. NOTICE OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ACCESS PERMIT REQUIREMENTS: DRIVEWAY ACCESS TO A STATE HIGHWAY SHALL BE AUTHORIZED ONLY BY THE DEPARTMENT OF TRANSPORTATION AS REQUIRED PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945, (P.P. 1242, NO. 428), KNOWN AS THE STATE HIGHWAY LAW.
28. THE PENNDOT REQUIRED RIGHT-OF-WAY ON ROUTE 30 IS TO BE DEEDED TO THE COMMONWEALTH OF PA.
29. THIS SITE LIES WITHIN THE CARBONATE AREA DISTRICT, AS DELINEATED BY THE CARBONATE AREA DISTRICT MAP WITHIN THE TOWNSHIP ZONING ORDINANCE.
30. THIS PLAN IS THE EXCLUSIVE PROPERTY OF EASTERN STATES ENGINEERING, INC. AND TOLL BROTHERS, INC. ALL RIGHTS AND REMDIES ARE HEREBY RESERVED. THIS PLAN MAY NOT BE REPRODUCED OR DISTRIBUTED IN ANY WAY WITHOUT WRITTEN CONSENT FROM EITHER PARTY.
31. SOILS ARE TAKEN FROM "SOIL SURVEY OF CHESTER AND DELAWARE COUNTIES, PENNSYLVANIA" (JULY 1975) US DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE.
32. PRECAUTIONARY AND PROHIBITIVE STEEP SLOPES DELINEATED ARE GREATER THAN OR EQUAL TO 1000 S.F. IN AREA, MEASURED OVER THREE (3) OR MORE TWO (2) FOOT CONTOURS.
33. ALL STREET NAME SIGNS SHALL CONFORM TO AND BE ERECTED AS PER WEST WHITELAND TOWNSHIP SPECIFICATIONS. ALL TRAFFIC CONTROL SIGNS SHALL CONFORM TO PADOT SPECIFICATIONS AND MOUNTED ON HEAVY DUTY BREAKAWAY CHANNEL POSTS (OR EQUAL AS APPROVED BY THE TOWNSHIP).
34. THE DEVELOPER WILL EMPLOY A FULL TIME GEOTECHNICAL INSPECTOR (ONE MUTUALLY AGREEABLE TO THE TOWNSHIP AND DEVELOPER) ON THE SITE DURING CONSTRUCTION OF THE DETENTION BASIN.
35. THE PROPOSED PUBLIC WATERMAIN DISTRIBUTION SYSTEM WILL BE OWNED AND MAINTAINED BY AQUA PENNSYLVANIA, INC.
36. INDIVIDUAL MAIL SERVICE IS TO BE PROVIDED FOR EACH UNIT AND THE HISTORIC DWELLING TO REMAIN.
37. THE PROPOSED PEDESTRIAN WALKPATH SHALL BE INSTALLED PER THE CONDITIONAL USE APPROVAL COMMENT NUMBER 7.
38. THE FOLLOWING WAIVER IS REQUESTED FROM THE WEST WHITLELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE:
SECTION 281-32.C. WHERE IT STATES THAT CURBS SHALL BE CONSTRUCTED OF CONCRETE. (THE APPLICANT WHISHED TO CONSTRUCT BELGIAN BLOCK CURBING FOR ALL CURBS OUTSIDE OF THE PADOT RIGHT-OF-WAY.
39. THIS PROJECT RECEIVED CONDITIONAL USE APPROVAL FROM THE WEST WHITELAND TOWNSHIP BOARD OF SUPERVISORS DURING THEIR MEETING HELD ON WEDNESDAY, AUGUST 10, 2005.
40. STORM WATER ROOF DRAINS SHALL NOT DISCHARGE WATER DIRECTLY OVER A SIDEWALK.
41. A MINIMUM OF FOUR (4) INCHES OF TOPSOIL SHALL BE PROVIDED ON ALL DISTURBED AREAS PRIOR TO FINAL SEEDING AND MULCHING.
42. APPROVAL FROM WEST WHITELAND TOWNSHIP WILL BE REQUIRED FOR ALL PROPOSED SANITARY SEWER CONNECTIONS.
43. ALL PROPOSED UTILITIES SHALL BE LOCATED UNDERGROUND.
44. FOR FINAL APPROVED EROSION AND SEDIMENT CONTROL MEASURES REFER TO PLAN SHEETS 29-33 OF 36 IN THIS PLAN SET AND SOIL EROSION AND SEDIMENT CONTROL REPORT BOTH PREPARED BY EASTERN STATES ENGINEERING, INC.
45. THE EXTERIOR BUILDING SURFACE COLORS ARE LIMITED TO EARTH TONES.
46. NO BELOW-GROUND STORAGE TANKS ARE PROPOSED.
47. NO FILL WILL BE USED THAT CONTAINS ANY MATERIAL THAT REPRESENTS A POTENTIAL CONTAMINATION HAZARD TO GROUND OR SURFACE WATER.
48. FACILITY SHALL NOT ACCOMODATE THE STORAGE, HANDLING, PROCESSING, OR DISPOSAL OF TOXIC MATERIALS OR ANY OTHER SUBSTANCE WITH THE POTENTIAL TO CONTAMINATE GROUND OR SURFACE WATERS.
49. FACILITY WILL NOT REQUIRE THE INSTALLATION OF A WATER SUPPLY WELL.
50. THE WATER AND SEWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE WEST WHITELAND TOWNSHIP STANDARDS.
51. NO SUMP PUMPS OR ROOF DRAINS SHALL BE CONNECTED TO THE SANITARY SEWER.

THIS SHEET IS PART OF AN AS-BUILT SET OF PLANS. HOWEVER THIS SHEET DOES NOT CONTAIN ANY AS-BUILT INFORMATION, AND THERE HAVE BEEN NO CHANGES MADE TO THIS PLAN SINCE THE LATEST RECORDED REVISION.

CONSTRUCTION NOTES:

1. DRIVEWAYS:
   A. THE EDGE OF THE DRIVEWAYS SHALL BE LOCATED NO LESS THAN 20 FEET FROM ANY STREET INTERSECTION WHICH SHALL BE MEASURED FROM THE CLOSEST CURB RADIUS RETURN.
   B. THE MAXIMUM GRADE FOR DRIVEWAYS SHALL NOT EXCEED 8.3% WITHIN THE RIGHT-OF-WAY AND 15% WITHIN LOTS. THE MINIMUM GRADE SHALL NOT BE LESS THAN 3.1% IN THE RIGHT-OF-WAY AND 2% WITHIN LOTS.
   C. DRIVEWAYS SHALL BE A MINIMUM OF 20' WIDE.
2. GRADING:
   A. MAXIMUM CUT AND FILL SLOPES SHALL BE 3 TO 1 UNLESS SLOPE PROTECTION IS UTILIZED.
   B. THE DEVELOPER RESERVES THE RIGHT TO ADD, DELETE OR MODIFY THE RETAINING WALLS AS FIELD CONDITIONS DICTATE. ANY SUCH MODIFICATION IS SUBJECT TO REVIEW AND APPROVAL BY THE TOWNSHIP.
   C. THE APPROVED FINAL GRADING AND DRAINAGE PLANS SHALL NOT BE DEVIATED FROM UNLESS APPROVED BY THE TOWNSHIP. THE TABAS TRACT IS TO MAINTAIN THE INTEGRITY OF THE DRAINAGE SWALES, AND NOT PERMIT ANY MODIFICATION TO THE APPROVED FINAL GRADING ON H.O.A. PROPERTY WITHOUT THE CONSENT AND APPROVAL OF THE TOWNSHIP.
3. SANITARY SEWERS:
   A. THE GRAVITY SANITARY SEWER MAIN SHALL BE CONSTRUCTED OF 8" SDR-35 PVC WITH PUSH-ON JOINTS OR EQUIVALENT.
   B. SANITARY SEWER LATERALS WITHIN THE RIGHT-OF-WAY SHALL BE A MINIMUM OF 6" PVC WITH A MINIMUM SLOPE OF 1/4" PER FOOT.
   C. A MINIMUM 10 FOOT HORIZONTAL CLEARANCE AND 1.5 FOOT VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN SANITARY SEWERS AND OTHER UTILITIES. IF CLEARANCE IS LESS THAN 1.5 FEET, CONCRETE ENCASEMENT SHALL BE USED.
   D. A MINIMUM OF 4 FEET OF COVER SHALL BE MAINTAINED OVER ALL SANITARY SEWER MAINS.
   E. THIS PLAN SHOWS A SINGLE SERVICE LATERAL TO EACH LOT/UNIT. MULTIPLE SERVICE LATERALS (2 UNITS PER LATERAL) MAY BE USED FOR THE MULTI-FAMILY UNITS UPON TOWNSHIP APPROVAL.
   F. SANITARY SERVICE TO BASEMENTS MAY BE AVAILABLE TO SOME UNITS, HOWEVER, BASEMENT SERVICE IS NOT GUARANTEED FOR ANY UNIT.
   G. ALL PIPE JOINTS SHALL BE SEALED WITH RUBBER GASKETS ACCORDING TO ASTM SPEC. C-923.
4. STORM SEWERS:
   A. ALL INLETS TO BE TYPE AS NOTED. ALL INLET BOXES ARE PADOT.
   B. INLET GRATES ARE STANDARD PADOT 4 FOOT (UNLESS OTHERWISE NOTED). ALL ROADWAY SUMP AND YARD INLET GRATES SHALL BE BICYCLE SAFE, STRUCTURAL STEEL GRATES.
   C. CONTRACTOR TO PROVIDE DETAILED DRAWINGS FOR SPECIAL INLET BOXES WITH PIPE DIAMETERS LARGER THAN 48" IN THE LONG DIRECTION AND/OR 30" IN THE SHORT DIRECTION.
   D. ALL STORM SEWERS SHALL BE CONSTRUCTED PER PA DOT SPECIFICATIONS AS OUTLINED IN PUBLICATION 408 DESIGN MANUAL, PART 2, HIGHWAY DESIGN AND STANDARDS FOR ROADWAY CONSTRUCTION, RC-SERIES UNLESS OTHERWISE DICTATED BY THE TOWNSHIP CODE.
   E. ALL PIPE JOINTS SHALL BE SEALED WITH RUBBER GASKETS ACCORDING WITH ASTM SPEC. C-443.
5. WATER SERVICE:
   A. WATER MAINS WILL BE DEDICATED TO THE AQUA PENNSYLVANIA, INC. WATER COMPANY. FINAL DESIGN OF THE WATER FACILITIES WILL BE APPROVED BY AQUA PENNSYLVANIA, INC.
   B. WATER MAINS SHALL HAVE A MINIMUM COVER OF 4 FEET IN A 2' WIDE TRENCH. THE MINIMUM MAIN DIAMETER SHALL BE 8".
   C. A MINIMUM 10 FOOT HORIZONTAL CLEARANCE AND 1.5 FOOT VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER MAINS.
   D. REFER TO AQUA PENNSYLVANIA, INC. SPECIFICATIONS FOR BUILDER EXTENSION PIPELINE CONSTRUCTION SPECIFICATIONS SECTIONS 1, 2, AND 3 FOR GENERAL INSTALLATION, SERVICE LINE, AND MATERIAL REQUIREMENTS.
   E. ALL TRENCHES SHALL BE BACKFILLED IN 6" LIFTS AND BE MECHANICALLY TAMPED.
   F. FIRE HYDRANTS ARE TO BE INSTALLED AT A LOCATION APPROVED BY THE TOWNSHIP.
   G. ALL TEES AND BONDS, BOTH HORIZONTAL AND VERTICAL, FIRE HYDRANTS AND BLOW-OFFS SHALL BE BLOCKED WITH 3,000 PSI CONCRETE THRUST BLOCKS (DETAIL E-7561).
   H. ALL WATERMAINS SHALL BE 8" D.I.P (CLASS 52).
   I. FIRE HYDRANTS SHALL BE MARKED WITH, CLASS 52 RAISED, PLOWABLE MARKERS PLACED IN THE STREET AT A LOCATOR APPROVED BY THE FIRE MARSHALL. THE MARKER SHALL BE A SAMSONITE MODEL 96 OR FIRE-MARSHALL APPROVED EQUAL.
6. ALL ELEVATIONS ON THESE PLANS ARE N.A.V.D. 1983.
7. PRECAUTIONARY AND PROHIBITIVE STEEP SLOPES DELINEATED ARE GREATER THAN OR EQUAL TO 1000 S.F. IN AREA, MEASURED OVER THREE (3) OR MORE TWO (2) FOOT CONTOURS.
8. ALL STREET NAME SIGNS SHALL CONFORM TO AND BE ERECTED AS PER WEST WHITELAND TOWNSHIP SPECIFICATIONS. ALL TRAFFIC CONTROL SIGNS SHALL CONFORM TO PADOT SPECIFICATIONS AND MOUNTED ON HEAVY DUTY BREAKAWAY CHANNEL POSTS (OR EQUAL AS APPROVED BY THE TOWNSHIP).
9. THE DESIGN OF RETAINING WALLS WILL BE SUBMITTED SEPARATELY FOR TOWNSHIP REVIEW AND APPROVAL. RETAINING WALL BACKFILL MATERIAL SHALL BE TESTED BY A QUALIFIED GEOTECHNICAL CONSULTANT AND APPROVED BY THE TOWNSHIP, FOR USE IN THE REINFORCED ZONE, MEETING THE MINIMUM REQUIREMENTS OF THE APPROVED DESIGN PLANS OR SPECIFICATIONS.
10. ALL SOIL BACKFILL SHALL BE TESTED BY A QUALIFIED GEOTECHNICAL CONSULTANT AND APPROVED BY THE TOWNSHIP FOR MOISTURE, DENSITY, AND COMPACTION PERIODICALLY (EVERY 2' VERTICALLY (100'-200' C/C) MEETING THE MINIMUM REQUIREMENTS OF THE APPROVED DESIGN PLANS OR SPECIFICATIONS.
11. ON-STREET PARKING SPACES ARE TO BE 9' WIDE x 18' DEEP.
12. ALL PROPOSED UTILITIES ARE TO BE INSTALLED UNDERGROUND WITH A MINIMUM DEPTH OF 24".
13. STREET INTERSECTIONS:
   A. NO WALL, FENCE, OR OTHER OBSTRUCTION SHALL BE ERECTED, ALLOWED, OR MAINTAINED, AND NO HEDGE, TREE, SHRUB, OR OTHER GROWTH SHALL BE PLANTED OR EXIST WHICH DANGEROUSLY OBSCURES THE VIEW OF APPROACHING TRAFFIC ALONG STREETS OR AT INTERSECTIONS.
   B. AT A STREET INTERSECTION, NOTHING SHALL BE ERECTED, GRADED, PLACED, OR ALLOWED TO GROW WHICH DANGEROUSLY OBSCURES THE VIEW WITHIN A CLEAR SIGHT TRIANGLE. ABOVE 2 1/2' AND BELOW 12" MEASURED FROM THE CENTERLINE GRADES OF THE INTERSECTION.
14. STREET TRAFFIC-CONTROL DEVICES:
   A. ALL STREET NAME SIGNS, TRAFFIC-CONTROL SIGNS, AND OTHER TRAFFIC-CONTROL DEVICES AS DEEMED NECESSARY BY THE TOWNSHIP SHALL BE PROVIDED AND ERECTED BY THE APPLICANT.
   B. ALL STREET NAME SIGNS SHALL CONFORM TO AND BE ERECTED AS PER WEST WHITELAND TOWNSHIP SPECIFICATIONS FOR STREET NAME SIGNS.
   C. ALL TRAFFIC-CONTROL SIGNS SHALL BE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION APPROVED, CONFORM TO APPLICABLE REGULATIONS, AND PLACED USING HEAVY-DUTY BREAK-AWAY CHANNEL POSTS (OR EQUAL AS APPROVED BY THE TOWNSHIP).
   D. ALL OTHER TRAFFIC-CONTROL DEVICES SHALL BE TOWNSHIP APPROVED AND CONFORM TO PENNSYLVANIA DEPARTMENT OF TRANSPORTATION AS WELL AS ALL OTHER APPLICABLE REGULATIONS, INCLUDING ANY FEDERAL OR COUNTY REGULATIONS PROMULGATED FOR SPECIFIC PROJECTS. TRAFFIC SIGNAL BODIES SHALL BE CONSTRUCTED OF ALUMINUM; PLASTIC WILL NOT BE PERMITTED. TO INSURE COMMONALITY OF PARTS, THE TOWNSHIP SHALL APPROVE ALL SIGNAL HARDWARE AND SOFTWARE.
   E. ALL TRAFFIC SIGNALS SHALL HAVE PREEMPTIVE EQUIPMENT PROVIDED AND ERECTED BY THE APPLICANT. ALL TRAFFIC SIGNALS, CONNECTIONS, CONTROLLERS, AND OTHER ASSOCIATED EQUIPMENT SHALL ALSO CONFORM TO THE CLOSED LOOP TRAFFIC SIGNAL SYSTEM OF THE TOWNSHIP.
15. STREET CONSTRUCTION:
   1. ALL MATERIALS USED IN THE CONSTRUCTION OF STREETS AND THE METHODS OF CONSTRUCTION AND DRAINAGE SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408, LATEST EDITION THEREOF, EXCEPT AS INDICATED HEREIN.

   A. SUBGRADE:
      (1.) THE AREA WITHIN THE LIMITS OF THE PROPOSED ROAD SURFACE SHALL BE SHAPED TO CONFORM TO THE LINE, GRADE, AND CROSS-SECTION OF THE PROPOSED ROAD.
      (2.) REMOVE OR STABILIZE ALL UNSUITABLE SUBGRADE MATERIALS TO THE SATISFACTION OF THE TOWNSHIP.
      (3.) WET OR SWAMPY AREAS SHALL BE PERMANENTLY DRAINED AND STABILIZED TO THE SATISFACTION OF THE TOWNSHIP.
      (4.) FILLS SHALL BE MADE WITH SUITABLE MATERIALS AND THOROUGHLY COMPACTED FOR FULL WIDTH IN UNIFORM LAYERS OF NOT MORE THAN EIGHT INCHES THICK TO THE SATISFACTION OF THE TOWNSHIP.
      (5.) THE SUBGRADE SHALL BE THOROUGHLY COMPACTED TO AT LEAST 95% MAXIMUM DRY DENSITY TO THE SATISFACTION OF THE TOWNSHIP.
      (6.) BACKFILL OF TRENCHES WITHIN THE CARTWAY AND CURB AREA SHALL BE THOROUGHLY COMPACTED PRIOR TO CONSTRUCTION OF SUBBASE TO THE SATISFACTION OF THE TOWNSHIP.
   B. BASE COURSE:
      (1.) BASE COURSES SHALL BE CONSTRUCTED ON A PROPERLY PREPARED 5" LAYER OF SUBBASE CONSTRUCTED OF 2A MODIFIED AGGREGATE. ADDITIONAL SUBBASE MAY BE REQUIRED AT THE DISCRETION OF THE TOWNSHIP AS UNSUITABLE SUBGRADE CONDITIONS WARRANT. APPROVAL OF THE SUBBASE SHALL BE SECURED FROM THE TOWNSHIP PRIOR TO CONSTRUCTION OF THE BASE COURSE.
      (2.) BASE COURSE SHALL BE CONSTRUCTED AS SPECIFIED BY THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408, LATEST REVISION, FOR FLEXIBLE PAVEMENTS.
      (3.) APPROVAL OF THE SUBSURFACE DRAINAGE AND SUBGRADE SHALL BE SECURED FROM THE TOWNSHIP PRIOR TO THE CONSTRUCTION OF THE SUBBASE.
      (4.) APPROVAL OF THE BASE COURSE SHALL BE SECURED FROM THE TOWNSHIP BEFORE THE CONSTRUCTION OF THE BINDER COURSE OR WEARING SURFACE COURSE. THE BINDER COURSE SHALL BE PLACED WITHIN 30 DAYS OF THE PLACEMENT OF THE BITUMINOUS CONCRETE BASE COURSE.
      (5.) APPROVAL OF THE BINDER COURSE SHALL BE SECURED FROM THE TOWNSHIP BEFORE THE CONSTRUCTION OF THE WEARING SURFACE COURSE. AT LEAST 2/3 OF THE LOTS MUST BE UNDER ROOF BEFORE THE SURFACE COURSE CAN BE PLACED.
      (6.) LOCAL RESIDENTIAL STREETS (INCLUDING PRIVATE STREETS) SHALL HAVE THE FOLLOWING CONSTRUCTION:
         (a.) 1 1/2" ID-2 WEARING, SRL-H.
         (b.) 1 1/2" ID-2 BINDER.
         (c.) 4" BITUMINOUS CONCRETE BASE COURSE.
         (d.) 5" SUBBASE (2-A MODIFIED).
   C. BACKFILLING:
      (1.) WHERE OPENINGS ARE REQUIRED IN EXISTING TOWNSHIP ROADS, ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CHAPTER 276, STREETS AND SIDEWALKS, ARTICLE I, EXCAVATIONS, OF WEST WHITELAND TOWNSHIP. OPENINGS MADE IN STATE ROADS SHALL BE RESTORED IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS. PERMITS SHALL BE REQUIRED BEFORE PAVING IS OPENED IN ANY EXISTING STATE OR TOWNSHIP ROAD. APPROVAL FROM WEST WHITELAND TOWNSHIP SHALL BE REQUIRED BEFORE PAVING IS OPENED IN ANY ROAD INTENDED TO BE DEDICATED TO THE TOWNSHIP.
      (2.) EXCAVATIONS WITHIN THE EXISTING OR PROPOSED RIGHT-OF-WAY OF ANY APPROVED SUBDIVISION ROADWAY SHALL BE BACKFILLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS UNLESS DIRECTED OTHERWISE BY OTHER TOWNSHIP GUIDELINES. THESE GUIDELINES SHALL ALSO APPLY TO ALL PAVED AREAS NOT INTENDED TO BE DEDICATED TO THE TOWNSHIP.
         (a.) BACKFILLING SHALL BE DONE AS PROMPTLY AS POSSIBLE.
         (b.) THE TRENCH SHALL BE BACKFILLED & COMPACTED WITH PADOT 2A STONE TO A HEIGHT OF AT LEAST ONE FOOT ABOVE THE TOP OF THE CONDUIT, PIPE, OR PIPE BELL IN 6" LIFTS.
         (c.) WHEN THE PIPE IS LOCATED IN A STREET OR ANY PLACE WHERE PAVING (INCLUDING DRIVEWAYS) MAY BE PLACED, THE REMAINDER OF THE TRENCH SHALL BE BACKFILLED WITH SELECT GRANULAR MATERIAL (2RC) WHICH HAS BEEN APPROVED BY THE TOWNSHIP AND PROMPTLY COMPACTED. THE BACKFILL MATERIAL SHALL BE MECHANICALLY TAMPED IN APPROXIMATELY SIX-INCH LIFTS.
         (d.) BACKFILLING OR TAMPING WITH TRENCHING MACHINES SHALL NOT BE ACCEPTABLE FOR TAMPING REQUIREMENTS.
         (e.) WHERE OPENINGS ARE MADE BEHIND THE CURBLINE, WORK SHALL BE PERFORMED AS REQUIRED IN THESE SPECIFICATIONS AND THE OPENING COVERED WITH GOOD TOPSOIL TO A DEPTH OF SIX INCHES AND SEEDED OR SODDED TO THE SATISFACTION OF THE TOWNSHIP.
         (f.) WHENEVER THE TRENCHES HAVE NOT BEEN PROPERLY FILLED OR IF SETTLEMENT OCCURS, THEY SHALL BE REFILLED, COMPACTED, SMOOTHED OFF, AND FINALLY MADE TO CONFORM TO THE SURFACE OF THE GROUND TO THE SATISFACTION OF THE TOWNSHIP.
         (g.) FROZEN MATERIAL SHALL NOT BE USED FOR BACKFILL, NOR SHALL ANY BACKFILLING BE DONE WHEN MATERIALS ALREADY IN THE TRENCH ARE FROZEN.

WAIVER LIST:

§281-32.C – A WAIVER IS REQUIRED FROM §281-32.C TO ALLOW THE USE OF BELGIAN BLOCK CURBING

§270-20.4.(1) – A WAIVER IS REQUIRED FROM §270-20.4.(1) TO NOT REQUIRE STORMWATER INFILTRATION.

(a) §270-11.A.(1)(a) "In the case of a requested waiver of the requirements of § 270-20QA(1), the site conditions of the property in question are such that control of stormwater in compliance with §270-20A(1) of this chapter is not possible;

Response: Due to the nature of the underlying carbonate structure groundwater infiltration is not possible for this site.

(b) There would be no predictable or apparent negative impact on adjoining property, either short-term or long-term, or no predictable or apparent impact on any water resources of the Township, either short-term or long-term, should a waiver be granted;

Response: The adjoining property would only be impacted by the increase in runoff volume for the more frequent storms, this would not be an adverse impact because the receiving piping system discharges into an existing detention basin in the Evian Development. Thus adequate storage volume will be present to handle the added runoff volume. The Township water resources would be impacted by this waiver if the project were to cause a substantial increase in water temperature of the receiving "cold water fishery" water course. The water-quality runoff is effectively removed from our wetland basin within the required time limitations so as not to impact the temperatures of the receiving water course.

(c) The applicant presents evidence including but not limited to engineering data, geotechnical reports, soil and geological studies, etc., which adequately documents that literal enforcement of the standards of this chapter are not achievable;

Response: See geotechnical report, carbonate study and infiltration results reports by DelVal Soil and Environmental Consultants.

(d) The applicant demonstrates that alternative design provisions shall achieve the objectives set forth in this chapter.

Response: See Stormwater Management report sections on Extended Detention / Shallow Wetland Basins achievements for water quality.

BOARD OF SUPERVISORS CONDITIONAL USE DECISION:
DATE: AUGUST, 10, 2005

THE FOLLOWING CONDITIONS ARE IMPOSED AND ATTACHED PURSUANT TO THE AUTHORITY OF THE MPC §603 (C) AND THE CODE §325-124.C.(2).

NUMBER, LAYOUT AND DESIGN OF UNITS

1. TO THE EXTENT NOT INCOSISTENT WITH THIS ORDER, THE DESIGN OF THE DEVELOPMENT AND CONSTRUCTION OF THE HOMES ON THE PROPERTY SHALL BE SUBSTANTIALLY IN ACCORDANCE WITH THE EXHIBITS AND TESTIMONY PRESENTED BY THE APPLICANT, AND IN PARTICULAR IN ACCORDANCE WITH THE PLAN. HOWEVER THE ACTUAL NUMBER OF UNITS FOR WHICH APPLICANT FINALLY RECEIVES PERMISSION SHALL BE DEPENDANT UPON COMPLIANCE WITH ALL APPLICABLE ORDINANCES BUT SHALL NOT EXCEED FORTY-SIX (46) NEW CARRIAGE HOUSE STYLE UNITS, PLUS THE EXISTING SINGLE FAMILY HISTORIC FARMHOUSE RESIDENCE. APPLICANT AGREES THAT THIS ORDER SHALL NOT VEST APPROVAL OF FORTY-SIX (46) NEW DWELLING UNITS AND THAT THE NUMBER OF NEW UNITS MAY HAVE TO BE REDUCED IN ORDER TO ALLOW THE DEVELOPMENT TO SATISFY THE MINIMUM SIXTY (60%) PERCENT OPEN SPACE REQUIREMENTS WHILE ACHIEVING FULL COMPLIANCE WITH THIS ORDER, ORDINANCE REQUIREMENTS SUCH AS SUBDIVISION AND LAND DEVELOPMENT (CHAPTER 281), ZONING (CHAPTER 325), STORMWATER (CHAPTER 270), GRADING, TREE PRESERVATION AND REPLACEMENT AND LANDSCAPING, AND ALL OTHER APPLICABLE REQUIREMENTS. THE APPLICANT FURTHER AGREES TO COMPLY WITH SUCH APPLICABLE ORDINANCES WITHOUT THE NECESSITY OF WAIVER OR VARIANCE EVEN IF THE NUMBER OF UNITS MUST BE REDUCED IN ORDER TO DO SO, PROVIDED THAT THE APPLICANT MAY SEEK ANY WAIVER OR VARIANCE (BUT NOT IF THE PURPOSE IS TO MAINTAIN OR INCREASE THE NUMBER OF NEW UNITS) SUBJECT TO THE MUTUAL AGREEMENT OF THE APPLICANT AND THE BOARD OF SUPERVISORS.

2. THE FOOTPRINT OF THE CARRIAGE HOUSE UNITS AS DEPICTED ON THE PLAN SHALL BE INCLUSIVE OF ACCESSORY OUTDOOR LIVING AREAS FOR EACH UNIT INCLUDING DECKS AND PATIOS.

3. UNITS WILL BE CONSTRUCTED OF STONE VENEER RATHER THAN BRICK IN ORDER TO SIMULATE THE HISTORIC WOODLEDGE HOUSE LOCATED ON THE PROPERTY.

4. THE APPLICANT SHALL FULLY COMPLY WITH THE COMPENSATORY PLANTING REQUIREMENTS OF §281-34.G. OF THE CODE BY PLANTING NEW TREES ON THE PROPERTY, BY PLANTING NEW TREES OFF-SITE AS APPROVED BY THE TOWNSHIP'S "TREE BANK". OR BY SOME COMBINATION OF THESE METHODS. THE FINAL OPTION SHALL BE DETERMINED BY THE BOARD OF SUPERVISORS AT THE TIME OF FINAL LAND DEVELOPMENT APPROVAL. THE EXPENSE OF IMPLEMENTING THE SELECTED OPTION SHALL BE INCLUDED IN THE FINANCIAL SECURITY TO BE POSTED WITH THE TOWNSHIP PRIOR TO THE RECORDING OF THE FINAL PLAN. THE LANDSCAPE PLAN FOR PLANTINGS ON THE PROPERTY OR OFF-SITE, AND/OR THE AMOUNT OF SUCH CONTRIBUTION SHALL BE APPROVED BY THE TOWNSHIP, AS ADVISED BY IT'S CONSULTANTS.

TRAFFIC, PARKING AND PEDESTRIAN CIRCULATION

5. THE APPLICANT SHALL PERMIT, DESIGN AND CONSTRUCT THE ACCESS DRIVEWAYS TO THE PROPERTY AS FOLLOWS: (A) FULL MOVEMENT ACCESS ON BUSINESS ROUTE 30 (LINCOLN HIGHWAY) WITH NO SPLIT PHASE LIGHT SIGNALIZATION IN CONJUNCTION WITH THE OPPOSING OAKLANDS BOULEVARD; AND (B) THE CONSTRUCTION OF AN EMERGENCY ACCESS CONNECTION TO BRISTOL CIRCLE IN THE EVIAN DEVELOPMENT, IN ACCORDANCE WITH THE PLAN, THE DESIGN OF WHICH SHALL BE APPROVED BY THE TOWNSHIP DURING PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN APPROVAL. THE FINAL DESIGN OF ALL TRAFFIC IMPROVEMENTS ON BUSINESS ROUTE 30 SHALL BE APPROVED BY THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION ("PENNDOT"), CHESTER COUNTY AND THE TOWNSHIP, AND THE APPLICANT SHALL PAY FOR ALL COSTS FOR SUCH DESIGN, MODIFICATIONS AND IMPROVEMENTS NOTWITHSTANDING THAT THE TOWNSHIP MAY BE THE APPLICANT FO ANY REQUIRED PERMIT. IN THE EVENT THAT PENNDOT WILL NOT APPROVE THE DESIGN WITHOUT SPLIT PHASE LIGHT SIGNALIZATION AT OAKLANDS BOULEVARD, THE APPLICANT MAY REOPEN THIS DECISION AND ORDER FOR THE LIMITED PURPOSE OF SECURING THE APPROVALOF A MODIFIED TRAFFIC DESIGN PLAN SATISFACTORY TO THE BOARD OF SUPERVISORS.

6. THE APPLICANT SHALL PROVIDE PEDESTRIAN SIDEWALKS WITHIN THE DEVELOPMENT IN ACCORDANCE WITH THE PLAN; AND FURTHER, SHALL CONSTRUCT PEDESTRIAN SIDEWALKS TO BUSINESS ROUTE 30 AND PROVIDE FOR SUCH MODIFICATIONS TO TRAFFIC SIGNAL PERMIT PLAN AND THE TRAFFIC ITSELF TO ACCOMMODATE PEDESTRIANS

7. THE APPLICANT SHALL CONSTRUCT THE PROPOSED TRAIL SYSTEM AS SHOWN ON THE PLAN. THE TRAIL SHALL INTERCONNECT WITH THE ADJACENT EVIAN DEVELOPMENT. THE PROPOSED TRAIL SYSTEM SHALL BE ASPAHLT SURFACED TO A MINIMUM WIDTH OF SIX (6) FEET AND SHALL BE AVAILABLE FOR USE BY THE GENERAL PUBLIC. THE APPLICANT SHALL COMPLETE THE INSTALLATION ALL PORTIONS OF THE TRAIL SYSTEM NO LATER THAN THE TIME THE PROPOSED ROAD HAS BEEN IMPROVED TO A MUD-FREE OR OTHERWISE PERMANENTLY PASSABLE CONDITION. THE LOCATION OF THE TRAIL THROUGH THE WOODED AREA OF THE PROPERTY SHALL BE DETERMINED TO MINIMIZE ANY TREE REMOVAL.

8. THE APPLICANT SHALL PROVIDE ADDITIONAL OFF-STREET PARKING AT THE RATE OF ONE PARKING SPACE PER THREE (OR FRACTION THEREOF) APPROVED NEW UNITS, IN ADDITION TO THE FOUR PARKING SPACES PROVIDED AT EACH NEW DWELLING UNIT. THE DESIGN AND LOCATION OF THE OFF-STREET PARKING SHALL BE SUBJECT TO THE SPPROVAL OF THE TOWNSHIP.

9. THE APPLICANT SHALL PROVIDE A LIGHTING PLAN SATISFACTORY TO THE TOWNSHIP, AS ADVISED BY THE TOWNSHIP'S CONSULTANTS. SUCH PLAN SHALL SPECIFICALLY CONSIDER THE NEED TO PROVIDE ACCEPTABLE LIGHTING AT STREET INTERSECTIONS AND OFF-STREET PARKING AREAS.

10. PRIOR OT THE ISSUANCE OF THE BUILDING PERMIT FOR THE FIRST BUILDING TO BE CONSTRUCTED ON THE PROPERTY, THE APPLICANT SHALL PAY TO THE TOWNSHIP THE AMOUNT OF $32,000.00 AS A CONDITION TO MITIGATE THE TRAFFIC IMPACT OF THE DEVELOPMENT. UPON THE SATISFACTION OF THIS PAYMENT, THE TOWNSHIP WILL NOT REQUIRE ANY ADDITIONAL TRAFFIC IMPACT CONTRIBUTION FROM THE APPLICANT IN CONNECTION WITH THE CONSTRUCTION OF THE DEVELOPMENT. NOTHING SET FORTH HEREIN SHALL BE INTERPRETED TO RESTRICT THE TOWNSHIP IN ANY FROM IMPOSING ANY FUTURE ASSESSMENT OR CHARGE ON THE PROPERTY IN CONNECTION WITH THE ESTABLISHMENT OF A TRAFFIC IMPROVEMENT PROGRAM IMPOSED ON A UNIFORM OR EQUAL BASIS UPON ALL OWNERS OR OCCUPANTS WITHIN THE AREA AS MAY BE AUTHORIZED BY LAW.

HISTORIC RESOURCE

11. THE APPLICANT SHALL COMPLY WITH THE COMMENTS AND RECOMMENDATIONS OF THE WEST WHITELAND TOWNSHIP HISTORICAL COMMISSION AND TOWNSHIP'S CONSULTANT REGARDING THE HISTORIC RESOURCE KNOWN AS WOODLEDGE, AS SET FORTH IN THE CORRESPONDENCE OF JOHN MILNER ASSOCIATES, INC. DATED FEBRUARY 9, 2005, AND THE MAY 20, 2005 EMAIL OF COMMISSION CHAIRMAN BRUCE FLANNERY (EXHIBIT B-18).

12. THE APPLICANT SHALL EXECUTE AND RECORD WITH THE FINA; SUBDIVISION AND LAND DEVELOPMENT PLAN A FAÇADE AND CONSERVATION EASEMENT IN FORM AND SUBSTANCE ACCEPTABLE TO THE BOARD OF SUPERVISORS AND TOWNSHIP SOLICITOR, PRESERVING THE EXTERIOR APPEARANCE OF WOODLEDGE RESIDENCE FROM FURTHER SUBDIVISION AND RESTRICTING THE USE OF THE LOT TO A SINGLE FAMILY DWELLING.

13. THE APPLICANT SHALL RELOCATE THE PROPOSED NEW UNIT NO. ONE IN THE CLUSTER NORTH OF WOODLEDGE AWAY FROM THE HISTORIC RESOURCE TO THE GREATEST EXTENT POSSIBLE WITH ADDITIONAL LANDSCAPING AND BUFFER ACCEPTABLE TO THE BOARD OF SUPERVISORS.

14. THE APPLICANT SHALL FINANCIALLY SECURE THE REPLACEMENT OF THE ROOF OF THE HISTORIC RESOURCE PRIOR TO THE RECORDING OF THE FINAL SUBDIVISION AND LAND DEVELOPMENT PLANS, IN AN AMOUNT ACCEPTABLE TO THE TOWNSHIP ENGINEER. THE APPLICANT SHALL REPLACE THE ROOF SO FINANCIALLY SECURED, PRIOR TO THE ISSUANCE OF THE FIRST BUILDING PERMIT.

MISCELLANEOUS

15. THE OPEN SPACE (INCLUDING WITHOUT LIMITATION ALL OF THE FACILITIES LOCATED WITHIN THE OPEN SPACE WITH THE SOLE EXCEPTION OF ANY UTILITY LINES), THE STORMWATER FACILITIES, TRAILS, SIDEWALKS, STREET TREES, STREET LIGHTS (INCLUDING PROVISION OF ELECTRICITY), EMERGENCY ACCESS DRIVE, OFF-STREET PARKING AREAS, COMMON LANDSCAPING, INCLUDING BUT NOT LIMITED TO THE LANDSCAPED ISLAND AT THE BOULEVARD ENTRANCE AT LINCOLN HIGHWAY, AND OTHER COMMON FACILITIES, SHALL BE OWNED AND MAINTAINED IN PERPETUITY BY A HOMEOWNER'S ASSOCIATION TO BE CREATED BY THE APPLICANT THROUGH A DECLARATION OF COOVENANTS AND RESTRICTIONS (THE "DEC;ARATION"0 APPROVED BY THE BOARD OF SUPERVISORS AND THE TOWNSHIP SOLICITOR PRIOR TO FINAL PLAN APPROVAL. IN ADDITION TO NORMAL AND CUSTOMARY TERMS, THE DECLARATION SHALL (1) DEED RESTRICT THE OPEN SPACE FROM FURTHER SUBDIVISION OR DEVELOPMENT, AND FROM USES INCONSISTENT WITH OPEN SPACE PURPOSES; AND (2) DEED RESTRICT THE REMOVAL OF PROTECTED WOODLANDS AND REPLACEMENT TREES. THE DEED RESTRICTIONS SHALL BE PROMINENTLY NOTED ON THE RECORDED FINAL PLAN OF SUBDIVISION. THE DECLARATION SHALL BE RECORDED ALONG WITH THE FINAL PLANS.

16. THE APPLICANT SHALL COMPLY WITH THE COMMENTS AND RECOMMENDATIONS SET FORTH IN CORRESPONDENCE OF SPOTTS, STEVENS AND MCCOY DATED MAY 5, 2005. THE APPLICANT SHALL INCORPORATE STORM WATER QUALITY MEASURES INTO THE STORM WATER MANAGEMENT DESIGN AS DETERMINED BY THE TOWNSHIP IN ACCORDANCE WITH CHAPTERS 270 AND 281 OF THE CODE. ALL STORM WATER MANAGEMENT FACILITIES SHALL BE DESIGNED TO THE SATISFACTION OF THE BOARD OF SUPERVISORS.

17. THE APPLICANT SHALL EXECUTE AND RECORD WITH THE FINAL LAND DEVELOPMENT PLAN THE TOWNSHIP'S STANDARD AGREEMENT REQUIRING CONTINUED MAINTENANCE OF STORM WATER MANAGEMENT FACILITIES.

18. THE APPLICANT SHALL EXECUTE AND RECORD WITH THE FINAL LAND DEVELOPMENT PLAN THE TOWNSHIP STANDARD LANDSCAPING RESTRICTIVE COVENANT.

19. WITHIN 30 DAYS OF THE DATE OF THIS DECISION AND ORDER, THE APPLICANT SHALL PAY IN FULL ALL FEES CHARGED BY TOWNSHIP CONSULTANTS FOR REVIEW OF THE CONDITIONAL USE APPLICATION AND PLANS AND PREPARATION OF THIS DECISION AND ORDER.

20. THE APPLICANT SHALL EXPRESS TO THE BOARD IN WRITING DELIVERED TO THE TOWNSHIP ADMINISTRATIVE OFFICES WITHIN TEN (10) DAYS OF THE APPLICANT'S RECEIPT OF THIS DECISION ITS FULL AND COMPLETE CONSENT TO THE CONDITIONS SPECIFIED HEREIN ABOVE OR THE APPLICATION FOR CONDITIONAL USE APPROVAL IS DENIED; THE BOARD EXPRESSLY FINDING AND CONCLUDING THAT THE APPLICATION, IN THE ABSENCE OF COMPLIANCE WITH THE SAID CONDITIONS, IS INCONSISTENT WITH THE STANDARDS, CRITERIA, PURPOSES AND POLICIES CODIFIED IN CODE §325-124.C.

SITE DATA:

TOTAL TRACT AREA (GROSS):	23.342 ACRES
EXISTING RIGHT-OF-WAY:	0.558 ACRES
PROPOSED ULTIMATE ROW (ROUTE 30):	0.335 ACRES
TOTAL TRACT AREA (NET):	22.449 ACRES

UPI NO: 41-04-25
ZONING DISTRICT: R-2
PROPOSED USE: 46 CARRIAGE HOMES +1 EXISTING HISTORIC SINGLE FAMILY HOME ON 22,000 SF LOT (R-2 SF MIN. LOT SIZE)

R-2 CARRIAGE HOME CLUSTER OPTION:	REQUIRED	PROVIDED:
DENSITY (MAXIMUM UNIT PER DEVELOPABLE AREA)	2.1	<2.1
TRACT SIZE (MINIMUM)	20 ACRES	23.34 ACRES
DWELLING UNIT – MINIMUM WIDTH	24 FEET	>33 FEET
FRONT YARD (MIN. FROM FACE OF CURB)	30 FEET	>30 FEET
PERIMETER SETBACK (MIN. FROM BOUNDRARY)	50 FEET	50 FEET
BUILDING SEPARATION– SIDE TO SIDE/SIDE TO REAR	30 FEET	>30 FEET
BUILDING SEPARATION – REAR TO REAR	60 FEET	>60 FEET
BUILDING COVERAGE (MAXIMUM)	15% (3.37 AC.)	<15% (2.41 AC.)
TOTAL IMPERVIOUS COVERAGE (MAXIMUM)	30% (6.58 AC.)	<30% (5.4 AC.)
MAXIMUM BUILDING HEIGHT	30 FEET	<30 FEET
COMMON OPEN SPACE (QUALIFYING)	60% (13.469 AC.)	>59.99% (13.471 AC.)
OPEN SPACE ALONG TRACT BOUNDARY >75' WIDE	90% MIN. (5.72 AC.)	>90% (6.21 AC.)
OPEN SPACE ALONG TRACT BOUNDARY 50 – 75' WIDE	10% MAX. (.63 AC.)	<10% (0.14 AC.)
ON-STREET PARKING SPACE	N/A	15%

R-2 SINGLE FAMILY ZONING DISTRICT:	REQUIRED	PROVIDED
MINIMUM LOT SIZE (SF)	22,000	>22,000
BUILDING COVERAGE (MAXIMUM)	12% (.061 AC.)	<12% (0.043 AC.)
TOTAL IMPERVIOUS COVERAGE (MAXIMUM)	20% (0.10 AC.)	<20% (0.87 AC.)
LOT WIDTH AT STREET LINE (MINIMUM)	75	75
LOT WIDTH AT THE BUILDING LINE (MINIMUM)	100	100
MAXIMUM BUILDING HEIGHT (FT.)	30	30
MINIMUM FRONT YARD (FT.)	50	50
MINIMUM SIDE YARD (FT.)	15	15
MINIMUM FOR BOTH (AGGREGRATE):	40	40
MINIMUM REAR YARD (FT.)	40	40

NATURAL RESOURCE PROTECTION AREAS:

NATURAL RESOURCE	EXISTING AREA (AC.)	PROPOSED DISTURBANCE
FLOODPLAIN:	0.0	0.0
FLOODPLAIN SOILS:	0.0	0.0
WETLANDS/WATERS OF THE US:	0.00	0.0
SLOPES: 15%- 25%	0.36	0.0
STEEP SLOPES: 25%>	0.001	0.0
WOODLANDS:	19.18	12.35

DEVELOPABLE ACREAGE:

GROSS SITE AREA:	23.342 ACRES
EXISTING R.O.W. (ROUTE 30):	– 0.558 ACRES
FLOODPLAIN:	– 0.000 ACRES
FLOODPLAIN SOILS:	– 0.000 ACRES
WETLANDS/WATERS OF THE US:	– 0.000 ACRES
STEEP SLOPES: 25%>	– 0.001 ACRES
NET SITE AREA (TOTAL)	22.783 ACRES

OPEN SPACE REQUIREMENTS:

GROSS SITE AREA:	23.342 ACRES
EXISTING R.O.W. (ROUTE 30):	– 0.558 ACRES
PROPOSED ULTIMATE R.O.W. (ROUTE 30):	– 0.335 ACRES
NET SITE AREA (TOTAL)	22.449 ACRES
MINIMUM REQUIRED COMMON OPEN SPACE AREA (NET SITE AREA x 60%)	13.469 ACRES
NET SITE AREA (TOTAL)	22.449 ACRES
WOOLEDGE LANE ROW	– 0.77 ACRES
DOWNING COURT ROW	– 1.290 ACRES
PARCEL B (SINGLE FAMILY HISTORIC LOT)	– 0.507 ACRES
MAXIMUM TOTAL OPEN SPACE AREA:	19.886 ACRES
MAXIMUM TOTAL OPEN SPACE AREA	19.886 ACRES
UNITS 1-46 (100% – INCLUDES UNIT, SIDEWALK, DRIVEWAYS):	– 4.759 ACRES
EASEMENTS (100% – DETENTION BASIN):	– 1.286 ACRES
EASEMENTS (50% – ACCESS, DRAINAGE & SANITARY):	– 0.370 ACRES
TOTAL QUALIFYING OPEN SPACE AREA:	13.471 ACRES

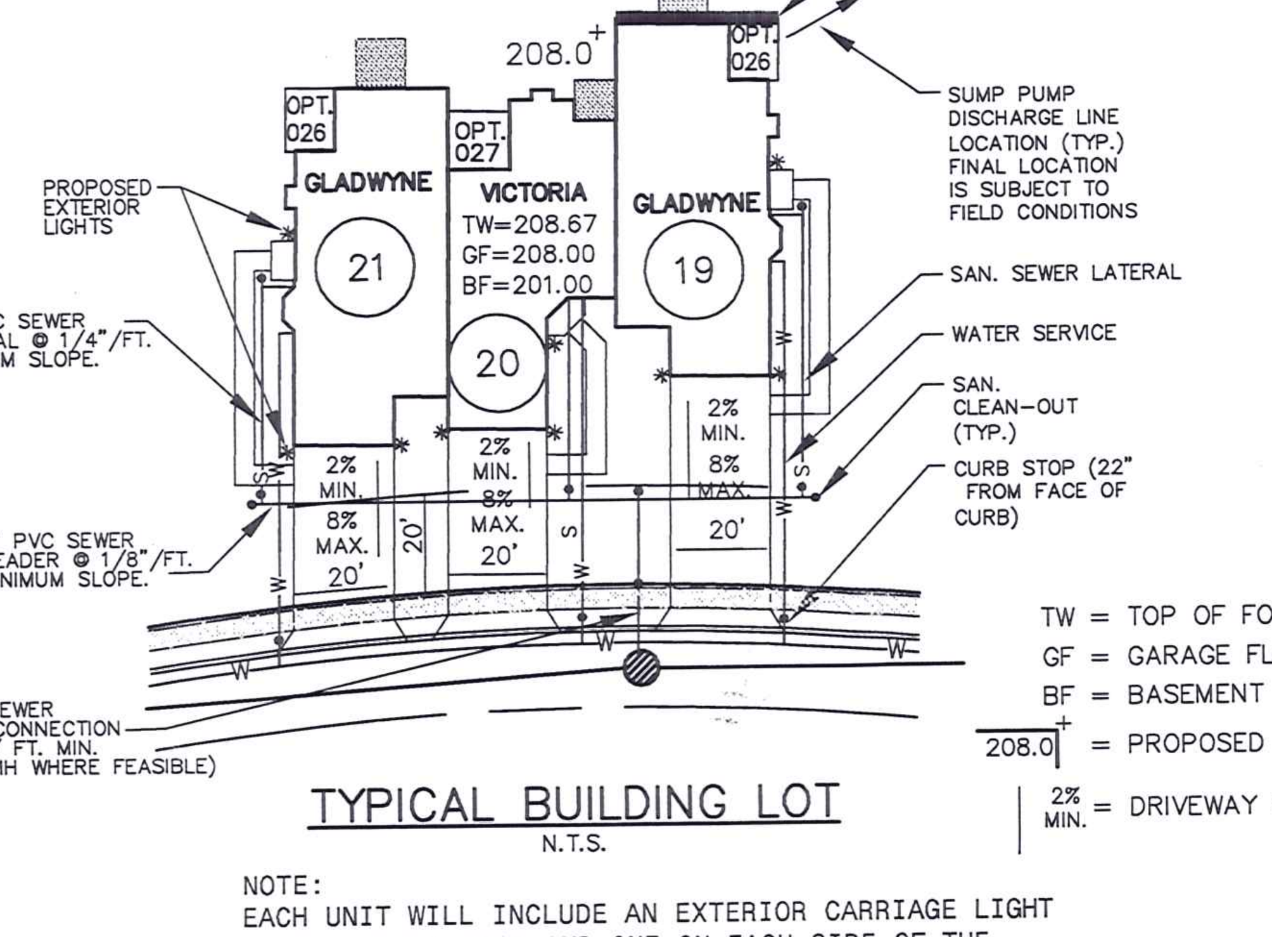
PARKING REQUIREMENTS:

HOUSE TYPE/SIZE	PARKING REQUIRMENT	TOTAL PARKING REQUIRED	TOTAL PARKING PROVIDED
3 BEDROOM	2.0 STALLS/UNIT	2 STALLS/UNIT X 46 UNITS = 92	92

OFF-STREET PARKING REQUIREMENT	OFF-STREET PARKING REQUIRED	OFF-STREET PARKING PROVIDED
1 STALL PER 3 UNITS	46 UNITS / 3 UNITS = 15.3	16

AREA TABULATION – TABAS TRACT:

TOTAL SITE AREA:	1,016,788 SQ. FT. OR	23.342 ACRES
PROPOSED PARCEL A:	866,256 SQ. FT. OR	19.886 ACRES
PROPOSED PARCEL B:	22,069 SQ. FT. OR	0.507 ACRES
WOODLEDGE LANE ROW AREA:	33,357 SQ. FT. OR	0.766 ACRES
DOWNING COURT ROW AREA:	56,174 SQ. FT. OR	1.290 ACRES
LINCOLN HIGHWAY US ROUTE 30 AREA:	24,319 SQ. FT. OR	0.558 ACRES
LINCOLN HIGHWAY US ROUTE 30 DEDICATED ROW AREA:	14,607 SQ. FT. OR	0.335 ACRES



TYPICAL BUILDING LOT

N.T.S.

TW = TOP OF FOUNDATION WALL ELEV.
GF = GARAGE FLOOR ELEV.
BF = BASEMENT FLOOR
208.0 = PROPOSED OUTSIDE SPOT GRADE
2% MIN. = DRIVEWAY SLOPE

NOTE:
EACH UNIT WILL INCLUDE AN EXTERIOR CARRIAGE LIGHT AT THE FRONT DOOR AND ONE ON EACH SIDE OF THE GARAGE AND THE TOTAL (AGGREGATE) LAMP RATING OF EACH FIXTURE SHALL NOT EXCEED THE EQUIVALENT OF A STANDARD NON-DIRECTIONAL 40 WATT INCANDESCENT LAMP (500 LUMINS).

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROGER M. FIELDS
LAND SURVEYOR No. 037548-E
Roger M. Fields

250 GIBRALTAR ROAD
SUITE 2E
HORSHAM, PA 19044
TEL: (215) 914-2050
FAX: (215) 293-5488

ESE EASTERN STATES ENGINEERING
CIVIL ENGINEERS - LAND SURVEYORS - LANDSCAPE ARCHITECTS - LAND PLANNERS

REV.	DATE	DESCRIPTION	DRAWN
8	12/21/11	FINAL AS-BUILT PLANS	RMF
7	09/15/06	FINAL CONSTRUCTION PLANS	JT
6	07/28/06	COMITTA LETTER DATED 7-27-06	JT
5	07/11/06	UPDATED FINAL PLAT PER APPLICANT	SDM
4	05/18/06	REVISED PER AGENCY REVIEW LETTERS & B.O.S. MTG.	EB
3	03/03/06	REVISED PER AGENCY REVIEW LETTERS	EB
2	01/09/06	REVISED PER AGENCY REVIEW LETTERS	EB
1	11/14/05	AGENCY LETTERS: 9/6/05, 9/16/05, 9/26/05, 9/29/05 (2), 9/30/05 (2), 10/6/05	EB

GENERAL NOTES

WOODLEDGE AT WHITFORD HILLS
WEST WHITELAND TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

DATE: 8/25/05	SCALE: NONE
DESIGN: JT	DRAWN: PAB
JOB NO.: 1987	FILE NAME: S-NOTES
REF. NO.: SD02.01	
SHEET NO.: 3 OF 36	

FINALLY RECEIVES PERMISSION SHALL BE DEPENDANT UPON COMPLIANCE
BLE ORDINANCES BUT SHALL NOT EXCEED FORTY-SIX (46) NEW CARRIAGE S, PLUS THE EXISTING SINGLE FAMILY HISTORIC FARMHOUSE RESIDENCE. THAT THIS ORDER SHALL NOT VEST APPROVAL OF FORTY-SIX (46) NEW ND THAT THE NUMBER OF NEW UNITS MAY HAVE TO BE REDUCED IN ORDER VELOPMENT TO SATISFY THE MINIMUM SIXTY (60%) PERCENT OPEN SPACE ILE ACHIEVING FULL COMPLIANCE WITH THIS ORDER, ORDINANCE CH AS SUBDIVISION AND LAND DEVELOPMENT (CHAPTER 281), ZONING RMWATER (CHAPTER 270), GRADING, TREE PRESERVATION AND REPLACEMENT , AND ALL OTHER APPLICABLE REQUIREMENTS. THE APPLICANT FURTHER Y WITH SUCH APPLICABLE ORDINANCES WITHOUT THE NECESSITY OF WAIVER N IF THE NUMBER OF UNITS MUST BE REDUCED IN ORDER TO DO SO, PROVIDED NT MAY SEEK ANY WAIVER OR VARIANCE (BUT NOT IF THE PURPOSE IS TO EASE THE NUMBER OF NEW UNITS) SUBJECT TO THE MUTUAL AGREEMENT OF D THE BOARD OF SUPERVISORS.

NT OF THE CARRIAGE HOUSE UNITS AS DEPICTED ON THE PLAN SHALL BE ESSORY OUTDOOR LIVING AREAS FOR EACH UNIT INCLUDING DECKS AND

E CONSTRUCTED OF STONE VENEER RATHER THAN BRICK IN ORDER TO TORIC WOODLEDGE HOUSE LOCATED ON THE PROPERTY.

NT SHALL FULLY COMPLY WITH THE COMPENSATORY PLANTING §281-34.G. OF THE CODE BY PLANTING NEW TREES ON THE PROPERTY, BY EES OFF-SITE AS APPROVED BY THE TOWNSHIP'S "TREE BANK". OR BY SOME THESE METHODS. THE FINAL OPTION SHALL BE DETERMINED BY THE BOARD OF HE TIME OF FINAL LAND DEVELOPMENT APPROVAL. THE EXPENSE OF E SELECTED OPTION SHALL BE INCLUDED IN THE FINANCIAL SECURITY TO BE TOWNSHIP PRIOR TO THE RECORDING OF THE FINAL PLAN. THE LANDSCAPE GS ON THE PROPERTY OR OFF-SITE, AND/OR THE AMOUNT OF SUCH ALL BE APPROVED BY THE TOWNSHIP, AS ADVISED BY IT'S CONSULTANTS.

AND PEDESTRIAN CIRCULATION
NT SHALL PERMIT, DESIGN AND CONSTRUCT THE ACCESS DRIVEWAYS TO THE LOWS: (A) FULL MOVEMENT ACCESS ON BUSINESS ROUTE 30 (LINCOLN O SPLIT PHASE LIGHT SIGNALIZATION IN CONJUNCTION WITH THE OPPOSING VARD; AND (B) THE CONSTRUCTION OF AN EMERGENCY ACCESS CONNECTION E IN THE EVIAN DEVELOPMENT, IN ACCORDANCE WITH THE PLAN, THE DESIGN BE APPROVED BY THE TOWNSHIP DURING PRELIMINARY SUBDIVISION AND NT PLAN APPROVAL. THE FINAL DESIGN OF ALL TRAFFIC IMPROVEMENTS ON 0 SHALL BE APPROVED BY THE PENNSYLVANIA DEPARTMENT OF ("PENNDOT"), CHESTER COUNTY AND THE TOWNSHIP, AND THE APPLICANT L COSTS FOR SUCH DESIGN, MODIFICATIONS AND IMPROVEMENTS G THAT THE TOWNSHIP MAY BE THE APPLICANT FO ANY REQUIRED PERMIT. IN PENNDOT WILL NOT APPROVE THE DESIGN WITHOUT SPLIT PHASE LIGHT T OAKLANDS BOULEVARD, THE APPLICANT MAY REOPEN THIS DECISION AND MITED PURPOSE OF SECURING THE APPROVALOF A MODIFIED TRAFFIC DESIGN RY TO THE BOARD OF SUPERVISORS.

NT SHALL PROVIDE PEDESTRIAN SIDEWALKS WITHIN THE DEVELOPMENT IN H THE PLAN; AND FURTHER, SHALL CONSTRUCT PEDESTRIAN SIDEWALKS TO 0 AND PROVIDE FOR SUCH MODIFICATIONS TO TRAFFIC SIGNAL PERMIT PLAN ITSELF TO ACCOMMODATE PEDESTRIANS

NT SHALL CONSTRUCT THE PROPOSED TRAIL SYSTEM AS SHOWN ON THE PLAN. INTERCONNECT WITH THE ADJACENT EVIAN DEVELOPMENT. THE PROPOSED ALL BE ASPAHLT SURFACED TO A MINIMUM WIDTH OF SIX (6) FEET AND SHALL R USE BY THE GENERAL PUBLIC. THE APPLICANT SHALL COMPLETE THE L PORTIONS OF THE TRAIL SYSTEM NO LATER THAN THE TIME THE PROPOSED MPROVED TO A MUD-FREE OR OTHERWISE PERMANENTLY PASSABLE LOCATION OF THE TRAIL THROUGH THE WOODED AREA OF THE PROPERTY INED TO MINIMIZE ANY TREE REMOVAL.

ANT SHALL PROVIDE ADDITIONAL OFF-STREET PARKING AT THE RATE OF ONE ER THREE (OR FRACTION THEREOF) APPROVED NEW UNITS, IN ADDITION TO THE ACES PROVIDED AT EACH NEW DWELLING UNIT. THE DESIGN AND LOCATION OF ARKING SHALL BE SUBJECT TO THE SPPROVAL OF THE TOWNSHIP.

ANT SHALL PROVIDE A LIGHTING PLAN SATISFACTORY TO THE TOWNSHIP, AS TOWNSHIP'S CONSULTANTS. SUCH PLAN SHALL SPECIFICALLY CONSIDER THE ACCEPTABLE LIGHTING AT STREET INTERSECTIONS AND OFF-STREET PARKING

E ISSUANCE OF THE BUILDING PERMIT FOR THE FIRST BUILDING TO BE N THE PROPERTY, THE APPLICANT SHALL PAY TO THE TOWNSHIP THE AMOUNT CONDITION TO MITIGATE THE TRAFFIC IMPACT OF THE DEVELOPMENT. UPON N OF THIS PAYMENT, THE TOWNSHIP WILL NOT REQUIRE ANY ADDITIONAL CONTRIBUTION FROM THE APPLICANT IN CONNECTION WITH THE F THE DEVELOPMENT. NOTHING SET FORTH HEREIN SHALL BE INTERPRETED TO WNSHIP IN ANY FROM IMPOSING ANY FUTURE ASSESSMENT OR CHARGE ON THE NECTION WITH THE ESTABLISHMENT OF A TRAFFIC IMPROVEMENT PROGRAM NIFORM OR EQUAL BASIS UPON ALL OWNERS OR OCCUPANTS WITHIN THE AREA ORIZED BY LAW.

RCE
ANT SHALL COMPLY WITH THE COMMENTS AND RECOMMENDATIONS OF THE D TOWNSHIP HISTORICAL COMMISSION AND TOWNSHIP'S CONSULTANT HISTORIC RESOURCE KNOWN AS WOODLEDGE, AS SET FORTH IN THE E OF JOHN MILNER ASSOCIATES, INC. DATED FEBRUARY 9, 2005, AND THE MAY 20, OMMISSION CHAIRMAN BRUCE FLANNERY (EXHIBIT B-18).

ANT SHALL EXECUTE AND RECORD WITH THE FINA; SUBDIVISION AND LAND LAN A FAÇADE AND CONSERVATION EASEMENT IN FORM AND SUBSTANCE THE BOARD OF SUPERVISORS AND TOWNSHIP SOLICITOR, PRESERVING THE RANCE OF WOODLEDGE RESIDENCE FROM FURTHER SUBDIVISION AND E USE OF THE LOT TO A SINGLE FAMILY DWELLING.

ANT SHALL RELOCATE THE PROPOSED NEW UNIT NO. ONE IN THE CLUSTER LEDGE AWAY FROM THE HISTORIC RESOURCE TO THE GREATEST EXTENT DDITIONAL LANDSCAPING AND BUFFER ACCEPTABLE TO THE BOARD OF

ANT SHALL FINANCIALLY SECURE THE REPLACEMENT OF THE ROOF OF THE RCE PRIOR TO THE RECORDING OF THE FINAL SUBDIVISION AND LAND LANS, IN AN AMOUNT ACCEPTABLE TO THE TOWNSHIP ENGINEER. THE L REPLACE THE ROOF SO FINANCIALLY SECURED, PRIOR TO THE ISSUANCE OF ING PERMIT.

PACE (INCLUDING WITHOUT LIMITATION ALL OF THE FACILITIES LOCATED N SPACE WITH THE SOLE EXCEPTION OF ANY UTILITY LINES), THE STORMWATER LS, SIDEWALKS, STREET TREES, STREET LIGHTS (INCLUDING PROVISION OF MERGENCY ACCESS DRIVE, OFF-STREET PARKING AREAS, COMMON NCLUDING BUT NOT LIMITED TO THE LANDSCAPED ISLAND AT THE BOULEVARD NCOLN HIGHWAY, AND OTHER COMMON FACILITIES, SHALL BE OWNED AND PERPETUITY BY A HOMEOWNER'S ASSOCIATION TO BE CREATED BY THE OUGH A DECLARATION OF COOVENANTS AND RESTRICTIONS (THE APPROVED BY THE BOARD OF SUPERVISORS AND THE TOWNSHIP SOLICITOR PLAN APPROVAL. IN ADDITION TO NORMAL AND CUSTOMARY TERMS, THE HALL (1) DEED RESTRICT THE OPEN SPACE FROM FURTHER SUBDIVISION OR AND FROM USES INCONSISTENT WITH OPEN SPACE PURPOSES; AND (2) DEED EMOVAL OF PROTECTED WOODLANDS AND REPLACEMENT TREES. THE DEED HALL BE PROMINENTLY NOTED ON THE RECORDED FINAL PLAN OF SUBDIVISION. ON SHALL BE RECORDED ALONG WITH THE FINAL PLANS.

CANT SHALL COMPLY WITH THE COMMENTS AND RECOMMENDATIONS SET FORTH ENCE OF SPOTTS, STEVENS AND MCCOY DATED MAY 5, 2005. THE APPLICANT RATE STORM WATER QUALITY MEASURES INTO THE STORM WATER DESIGN AS DETERMINED BY THE TOWNSHIP IN ACCORDANCE WITH CHAPTERS 270 CODE. ALL STORM WATER MANAGEMENT FACILITIES SHALL BE DESIGNED TO ON OF THE BOARD OF SUPERVISORS.

CANT SHALL EXECUTE AND RECORD WITH THE FINAL LAND DEVELOPMENT PLAN S STANDARD AGREEMENT REQUIRING CONTINUED MAINTENANCE OF STORM EMENT FACILITIES.

CANT SHALL EXECUTE AND RECORD WITH THE FINAL LAND DEVELOPMENT PLAN STANDARD LANDSCAPING RESTRICTIVE COVENANT.

DAYS OF THE DATE OF THIS DECISION AND ORDER, THE APPLICANT SHALL PAY IN CHARGED BY TOWNSHIP CONSULTANTS FOR REVIEW OF THE CONDITIONAL USE ND PLANS AND PREPARATION OF THIS DECISION AND ORDER.

CANT SHALL EXPRESS TO THE BOARD IN WRITING DELIVERED TO THE TOWNSHIP VE OFFICES WITHIN TEN (10) DAYS OF THE APPLICANT'S RECEIPT OF THIS DECISION OMPLETE CONSENT TO THE CONDITIONS SPECIFIED HEREIN ABOVE OR THE OR CONDITIONAL USE APPROVAL IS DENIED; THE BOARD EXPRESSLY FINDING AND HAT THE APPLICATION, IN THE ABSENCE OF COMPLIANCE WITH THE SAID INCONSISTENT WITH THE STANDARDS, CRITERIA, PURPOSES AND POLICIES DE §325-124.C.

UPI NO: 41-04-25
ZONING DISTRICT: R-2
PROPOSED USE: 46 CARRIAGE HOMES +1 EXISTING HISTORIC SINGLE FAMILY HOME ON 22,000 SF LOT (R-2 SF MIN. LOT SIZE)

R-2 CARRIAGE HOME CLUSTER OPTION:	REQUIRED	PROVIDED:
DENSITY (MAXIMUM UNIT PER DEVELOPABLE AREA)	2.1	<2.1
TRACT SIZE (MINIMUM)	20 ACRES	23.34 ACRES
DWELLING UNIT – MINIMUM WIDTH	24 FEET	>33 FEET
FRONT YARD (MIN. FROM FACE OF CURB)	30 FEET	>30 FEET
PERIMETER SETBACK (MIN. FROM BOUNDARY)	50 FEET	50 FEET
BUILDING SEPARATION– SIDE TO SIDE/SIDE TO REAR	30 FEET	>30 FEET
BUILDING SEPARATION – REAR TO REAR	60 FEET	>60 FEET
BUILDING COVERAGE (MAXIMUM)	15% (3.37 AC.)	<15% (2.41 AC.)
TOTAL IMPERVIOUS COVERAGE (MAXIMUM)	30% (6.58 AC.)	<30% (5.4 AC.)
MAXIMUM BUILDING HEIGHT	30 FEET	<30 FEET
COMMON OPEN SPACE (QUALIFYING)	60% (13.469 AC.)	>59.99% (13.471 AC.)
OPEN SPACE ALONG TRACT BOUNDARY >75' WIDE	90% MIN. (5.72 AC.)	>90% (6.21 AC.)
OPEN SPACE ALONG TRACT BOUNDARY 50 – 75' WIDE	10% MAX. (.63 AC.)	<10% (0.14 AC.)
ON-STREET PARKING SPACE	N/A	15%

R-2 SINGLE FAMILY ZONING DISTRICT:	REQUIRED	PROVIDED
MINIMUM LOT SIZE (SF)	22,000	>22,000
BUILDING COVERAGE (MAXIMUM)	12% (.061 AC.)	<12% (0.043 AC.)
TOTAL IMPERVIOUS COVERAGE (MAXIMUM)	20% (0.10 AC.)	<20% (0.87 AC.)
LOT WIDTH AT STREET LINE (MINIMUM)	75	75
LOT WIDTH AT THE BUILDING LINE (MINIMUM)	100	100
MAXIMUM BUILDING HEIGHT (FT.)	30	30
MINIMUM FRONT YARD (FT.)	50	50
MINIMUM SIDE YARD (FT.)	15	15
MINIMUM FOR BOTH (AGGREGRATE):	40	40
MINIMUM REAR YARD (FT.)	40	40

NATURAL RESOURCE PROTECTION AREAS:

NATURAL RESOURCE	EXISTING AREA (AC.)	PROPOSED DISTURBANCE
FLOODPLAIN:	0.0	0.0
FLOODPLAIN SOILS:	0.0	0.0
WETLANDS/WATERS OF THE US:	0.00	0.0
SLOPES: 15%- 25%	0.36	0.0
STEEP SLOPES: 25%>	0.001	0.0
WOODLANDS:	19.18	12.35

DEVELOPABLE ACREAGE:

GROSS SITE AREA:	23.342	ACRES
EXISTING R.O.W. (ROUTE 30):	– 0.558	ACRES
FLOODPLAIN:	– 0.000	ACRES
FLOODPLAIN SOILS:	– 0.000	ACRES
WETLANDS/WATERS OF THE US:	– 0.000	ACRES
STEEP SLOPES: 25%>	– 0.001	ACRES
NET SITE AREA (TOTAL)	22.783	ACRES

OPEN SPACE REQUIREMENTS:

GROSS SITE AREA:	23.342	ACRES
EXISTING R.O.W. (ROUTE 30):	– 0.558	ACRES
PROPOSED ULTIMATE R.O.W. (ROUTE 30):	– 0.335	ACRES
NET SITE AREA (TOTAL)	22.449	ACRES
MINIMUM REQUIRED COMMON OPEN SPACE AREA (NET SITE AREA x 60%)	13.469	ACRES
NET SITE AREA (TOTAL)	22.449	ACRES
WOOLEDGE LANE ROW	– 0.77	ACRES
DOWNING COURT ROW	– 1.290	ACRES
PARCEL B (SINGLE FAMILY HISTORIC LOT)	– 0.507	ACRES
MAXIMUM TOTAL OPEN SPACE AREA:	19.886	ACRES
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UNITS 1–46 (100% – INCLUDES UNIT, SIDEWALK, DRIVEWAYS):	– 4.759	ACRES
EASEMENTS (100% – DETENTION BASIN):	– 1.286	ACRES
EASEMENTS (50% – ACCESS, DRAINAGE & SANITARY):	– 0.370	ACRES
TOTAL QUALIFYING OPEN SPACE AREA:	13.471	ACRES

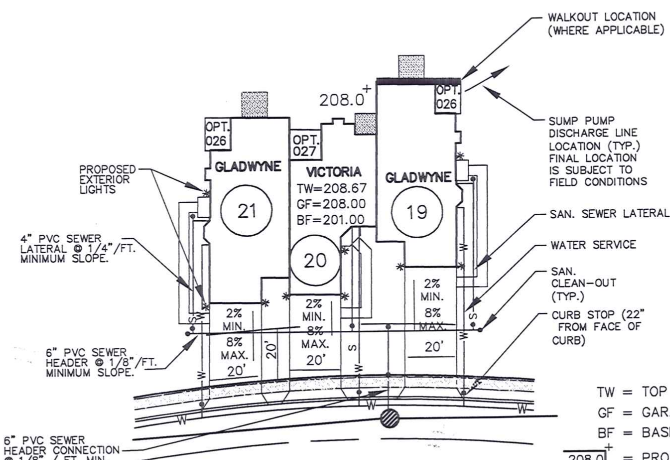
PARKING REQUIREMENTS:

HOUSE TYPE/SIZE	PARKING REQUIRMENT	TOTAL PARKING REQUIRED	TOTAL PARKING PROVIDED
3 BEDROOM	2.0 STALLS/UNIT	2 STALLS/UNIT X 46 UNITS = 92	92

OFF-STREET PARKING REQUIREMENT	OFF-STREET PARKING REQUIRED	OFF-STREET PARKING PROVIDED
1 STALL PER 3 UNITS	46 UNITS / 3 UNITS = 15.3	16

AREA TABULATION – TABAS TRACT:

TOTAL SITE AREA:	1,016,788 SQ. FT. OR	23.342 ACRES
PROPOSED PARCEL A:	866,256 SQ. FT. OR	19.886 ACRES
PROPOSED PARCEL B:	22,069 SQ. FT. OR	0.507 ACRES
WOODLEDGE LANE ROW AREA:	33,357 SQ. FT. OR	0.766 ACRES
DOWNING COURT ROW AREA:	56,174 SQ. FT. OR	1.290 ACRES
LINCOLN HIGHWAY US ROUTE 30 AREA:	24,319 SQ. FT. OR	0.558 ACRES
LINCOLN HIGHWAY US ROUTE 30 DEDICATED ROW AREA:	14,607 SQ. FT. OR	0.335 ACRES



TW = TOP OF FOUNDATION WALL ELEV.
GF = GARAGE FLOOR ELEV.
BF = BASEMENT FLOOR
208.0 = PROPOSED OUTSIDE SPOT GRADE
2% MIN. = DRIVEWAY SLOPE

TYPICAL BUILDING LOT
N.T.S.

NOTE:
EACH UNIT WILL INCLUDE AN EXTERIOR CARRIAGE LIGHT AT THE FRONT DOOR AND ONE ON EACH SIDE OF THE GARAGE AND THE TOTAL (AGGREGATE) LAMP RATING OF EACH FIXTURE SHALL NOT EXCEED THE EQUIVALENT OF A STANDARD NON-DIRECTIONAL 40 WATT INCANDESCENT LAMP (500 LUMINS).

ESE EASTERN STATES ENGINEERING
CIVIL ENGINEERS - LAND SURVEYORS - LANDSCAPE ARCHITECTS - LAND PLANNERS
250 GIBRALTAR ROAD
SUITE 2E
HORSHAM, PA 19044
TEL: (215) 914-2050
FAX: (215) 293-5488

REV.	DATE	DESCRIPTION	DRAWN
8	12/21/11	FINAL AS-BUILT PLANS	RMF
7	[illegible]	FINAL CONSTRUCTION PLANS	JT
6	07/28/06	COMITTA LETTER DATED 7-27-06	JT
5	07/11/06	UPDATED FINAL PLAT PER APPLICANT	SDM
4	05/18/06	REVISED PER AGENCY REVIEW LETTERS & B.O.S. MTG.	EB
3	03/03/06	REVISED PER AGENCY REVIEW LETTERS	EB
2	01/09/06	REVISED PER AGENCY REVIEW LETTERS	EB
1	11/14/05	AGENCY LETTERS: 9/6/05, 9/16/05, 9/26/05, 9/29/05 (2), 9/30/05 (2), 10/6/05	EB

GENERAL NOTES

WOODLEDGE AT WHITFORD HILLS
WEST WHITELAND TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

DATE: 8/25/05	SCALE: NONE
DESIGN: JT	DRAWN: PAB
JOB NO.: 1987	FILE NAME: S-NOTES
REF. NO.: SD02.01	
SHEET NO.: 3 OF 36	

GENERAL NOTES:

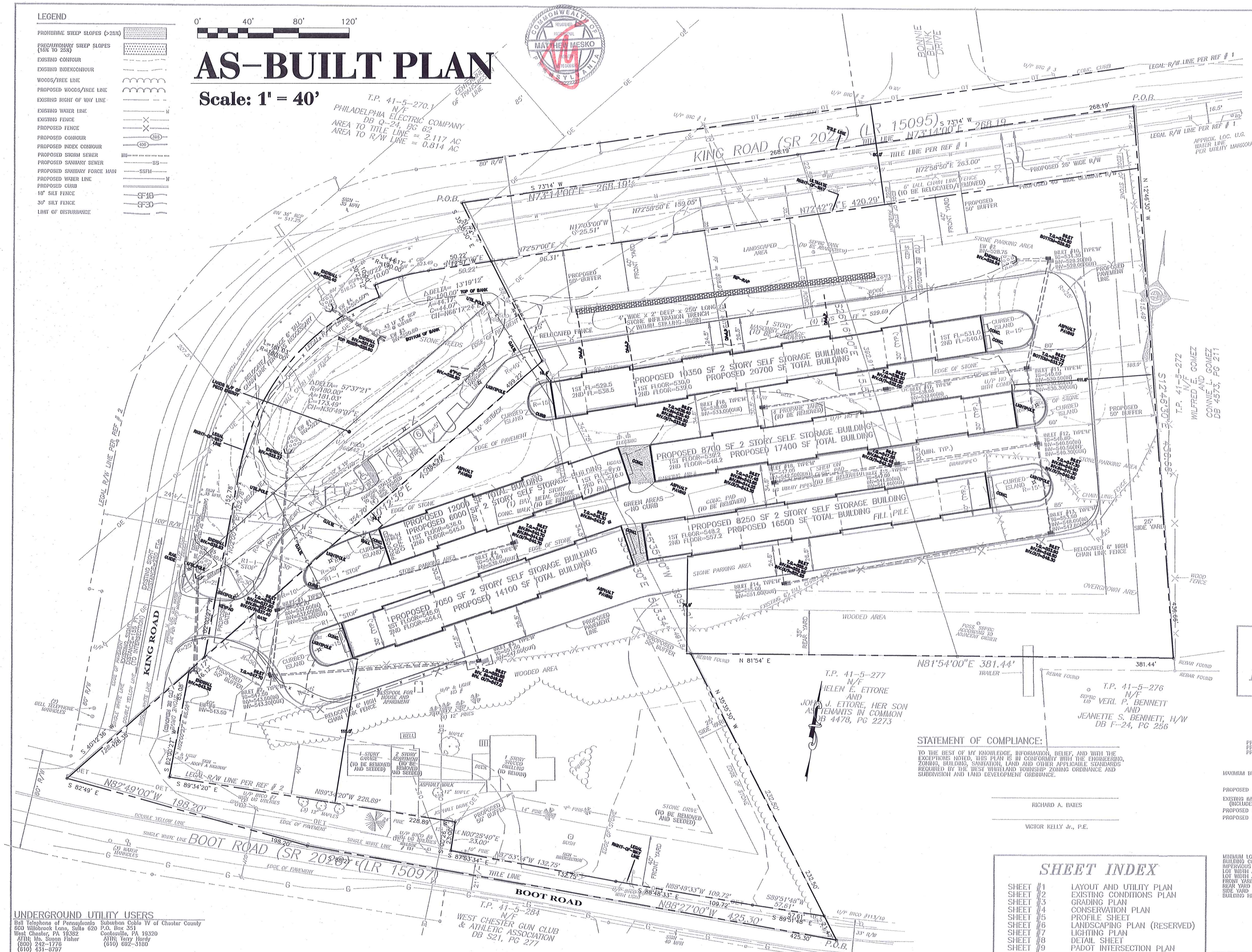
1. THIS PROJECT IS WITHIN THE R-2 ZONING ON UPI NO. 41-04-25 WHICH IS CURRENTLY AN ACTIVE SINGLE FAMILY RESIDENTIAL LOT CONSISTING PRIMARILY OF WOODED AREAS.
2. ALL TRAFFIC CONTROL SIGNS SHALL HAVE TYPE 3 REFLECTIVE SHEETING.
3. THIS PLAN MAY HAVE BEEN INTENDED FOR AGENCY AND MUNICIPALITY REVIEW PURPOSES ONLY. USERS OF THIS PLAN ARE DIRECTED TO RESEARCH THE COUNTY CLERK'S OFFICE FOR SUBSEQUENT FILED COPIES OF THIS PLAN.
4. ALL EASEMENTS SHALL BE MARKED AT THEIR BEGINNING AND AT THEIR END WITH IRON PINS RON PINS SHALL BE PLACED IN THE GROUND AFTER FINAL GRADING IS COMPLETE AND SHOULD BE 1" ABOVE FINISHED GROUND.
5. THESE PLANS WERE PREPARED PER THE WEST WHITELAND TOWNSHIP SUBDIVISION/LAND DEVELOPMENT AND STORMWATER MANAGEMENT ORDINANCE DATED DECEMBER 8, 1998, AND THE WEST WHITELAND TOWNSHIP ZONING ORDINANCE DATED DECEMBER 8, 1998.
6. THIS SITE DOES NOT CONTAIN ANY EXISTING FLOODPLAIN, FLOODPLAIN SOILS, WETLANDS OR WATERS OF THE UNITED STATES.
7. ALL STREETS WITHIN THE SUBDIVISION ARE TO BE PUBLIC STREETS WHICH ARE DEDICATED TO AND BE MAINTAINED BY WEST WHITELAND TOWNSHIP.
8. THE PROPOSED SANITARY SEWER COLLECTION SYSTEM SHALL BE OFFERED FOR DEDICATION TO WEST WHITELAND TOWNSHIP.
9. MONUMENTS SHALL BE PLACED IN THE GROUND AFTER FINAL GRADING IS COMPLETED, AT A TIME SPECIFIED BY THE TOWNSHIP ENGINEER. THE MONUMENT SHALL BE CONCRETE, THE SIZE AND LENGTH AS MAY BE APPROVED BY THE TOWNSHIP ENGINEER.
10. AN NPDES PERMIT IS REQUIRED FOR THIS PROJECT FROM THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
12. THE DESIGNATED PASSIVE OPEN SPACE SHALL NOT BE FURTHER SUBDIVIDED AND IS TO BE OWNED AND MAINTAINED BY THE COMMUNITY HOMEOWNERS ASSOCIATION.
13. THE LOCATION OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS AND ACCURACY OF THE LOCATION AND DEPTH OF UNDERGROUND FACILITIES CANNOT BE GUARANTEED. THE CONTRACTOR MUST VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND FACILITIES PRIOR TO THE START OF CONSTRUCTION PER PENNSYLVANIA ACT 172 (FORMER ACT 287).
14. ALL STORM SEWER AND ROADS SHALL BE OWNED AND MAINTAINED BY WEST WHITELAND TOWNSHIP.
15. ALL EXISTING DEBRIS, SEPTIC TANKS AND WELLS LOCATED ON THE SITE SHALL BE REMOVED, HOWEVER, THE EXISTING HISTORIC HOUSE IS TO REMAIN.
16. UTILITY COMPANIES ARE GRANTED AN EASEMENT OVER, UNDER AND ACROSS A TEN (10) FOOT WIDE PORTION OF THE FRONT YARDS. THE EASEMENT AREA SHALL BE MEASURED FROM THE RIGHT-OF-WAY AND RUN THE ENTIRE LENGTH OF THE RIGHT-OF-WAY. THE EASEMENT IS GRANTED FOR THE PURPOSE OF PLACEMENT AND MAINTENANCE OF ELECTRIC TRANSFORMERS AND TELEPHONE AND CABLE TERMINAL BOXES, WHICH WILL BE ENGINEERED FOR SPECIFIC LOCATIONS ON LOTS PER THE UTILITY COMPANIES DESIGN CRITERIA AND WILL NOT BE RELOCATED.
17. REFER TO A PLAN ENTITLED "TABAS TRSCT: UPI 41-04-25 - MAP OF BOUNDARY SURVEY" REPARED BY EASTERN STATES ENGINEERING DATED FEBRUARY 25, 2005, LAST REVISED MAY 16, 2005.
18. THE DETENTION BASIN STRUCTURE IS TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
19. THE DETENTION BASIN MAINTENANCE EASEMENT IS TO BE USED BY THE TOWNSHIP FOR INSPECTIONS OF THE STORMWATER MANAGEMENT FACILITIES.
20. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WEST WHITELAND TOWNSHIP CODES AND SPECIFICATIONS AND PADOT 408 SPECIFICATIONS DATED DATED 2000 AND AS AMENDED, UNLESS OTHERWISE NOTED.
21. NO PLANTINGS, BUILDINGS, OR OTHER STRUCTURES MAY BE PLACED IN OR ON DRAINAGE, UTILITY AND ACCESS EASEMENTS BEYOND WAS IS SHOWN ON THE FINAL APPROVED PLANS.
22. TOPOGRAPHY AND EXISTING FEATURES SHOWN PER AERIAL PHOTOGRAMMETRY BASED ON A FLIGHT DATE OF 02-12-05 AND REPRESENTS CONDITONS ON THAT DATE. OBTAINED BY EASTERN STATES ENGINEERING, INC.
23. SIGHT TRIANGLE EASEMENTS ARE TO BE OWNED AND MAINTAINED BY THE PROPERTY OWNERS.
24. THE ULTIMATE RIGHT-OF-WAY ON ROUTE 30 (LINCOLN HIGHWAY) IS DEDICATED TO WEST WHITELAND TOWNSHIP.
25. ALL LOTS ARE TO BE SERVICED BY PUBLIC WATER AND SEWER.
26. PENNSYLVANIA ONE-CALL SYSTEM: 1-800-242-1776. EASTERN STATES ENGINEERING, INC., DOES NOT GUARANTEE THE VERTICAL OR HORIZONTAL LOCATION FROM THE EXISTING SUBSURFACE UTILITIES SHOWN HEREON, NOR DOES EASTERN STATES ENGINEERINGING, INC., GUARANTEE ALL SUBSURFACE UTILITIES AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF WORK AS REQUIRED BY ACT 38.
27. NOTICE OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ACCESS PERMIT REQUIREMENTS: DRIVEWAY ACCESS TO A STATE HIGHWAY SHALL BE AUTHORIZED ONLY BY THE DEPARTMENT OF TRANSPORTATION AS REQUIRED PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945, (P.P. 1242, NO. 428), KNOWN AS THE STATE HIGHWAY LAW.
28. THE PENNDOT REQUIRED RIGHT-OF-WAY ON ROUTE 30 IS TO BE DEEDED TO THE COMMONWEALTH OF PA.
29. THIS SITE LIES WITHIN THE CARBONATE AREA DISTRICT, AS DELINEATED BY THE CARBONATE AREA DISTRICT MAP WITHIN THE TOWNSHIP ZONING ORDINANCE.

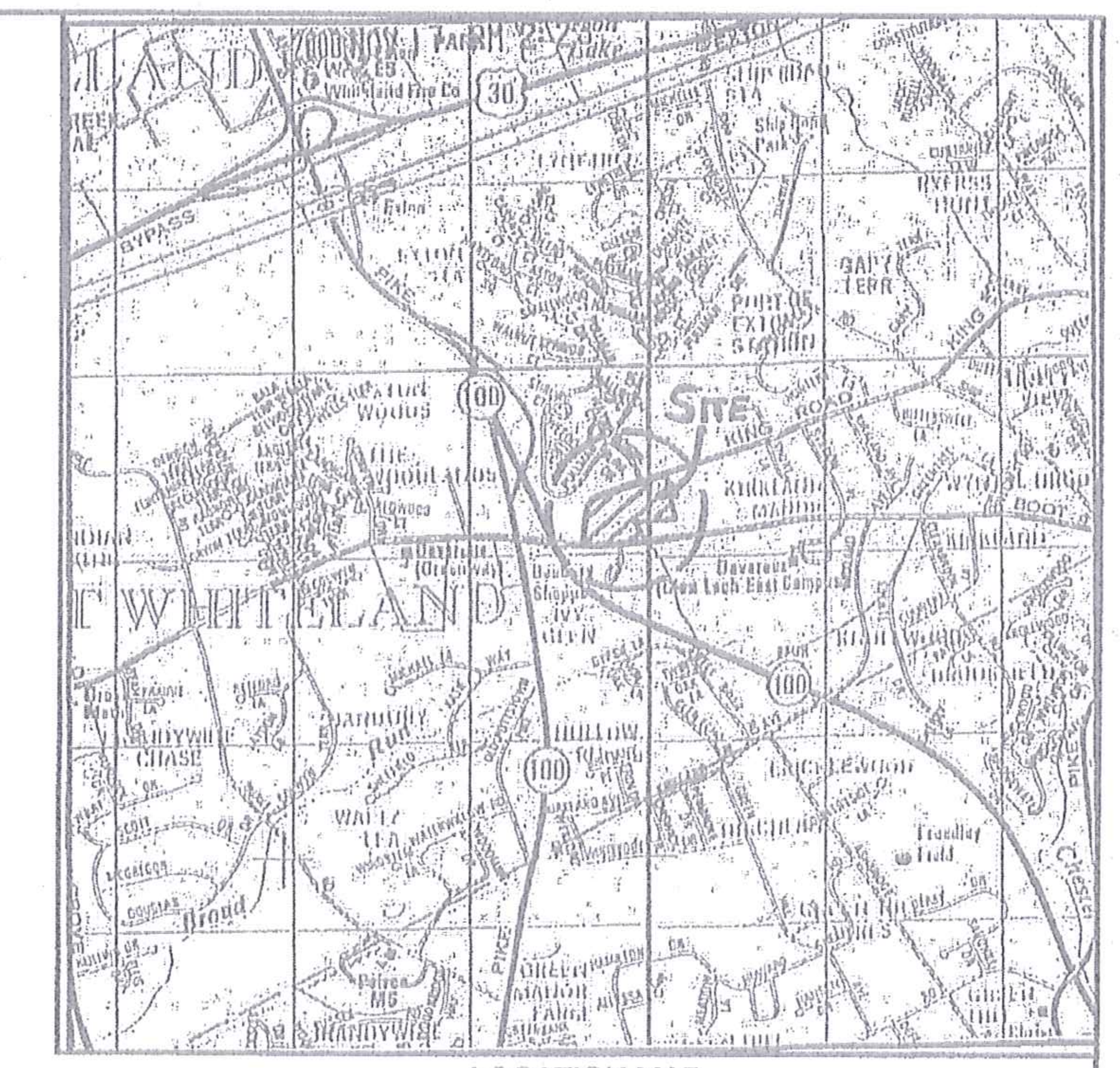
CONSTRUCTION NOTES

1. DRIVEWAYS:
   - A. THE EDGE ... THAN 20 F... BE MEASUR...
   - B. THE MAXIM... WITHIN THE ... MINIMUM GR... RIGHT-OF-...
   - C. DRIVEWAYS ...
2. GRADING:
   - A. MAXIMUM C... SLOPE PRO...
   - B. THE DEVEL... MODIFY THE ... ANY SUCH ... APPROVAL ...
   - C. THE APPRO... NOT BE DE... THE TABAS... DRAINAGE ... APPROVED ... CONSENT A...
3. SANITARY SEWERS:
   - A. THE GRAVI... OF 8" SDR...
   - B. SANITARY ... BE A MINIM... PER FOOT.
   - C. A MINIMUM ... VERTICAL ... SANITARY ... LESS THAN...
   - D. A MINIMUM ... ALL SANITA...
   - E. THIS PLAN ... LOT/UNIT. ... LATERAL) ... TOWNSHIP ...
   - F. SANITARY ... UNITS, HO... ANY UNIT.
   - G. ALL PIPE ... ACCORDING...
4. STORM SEWERS:
   - A. ALL INLETS ... PADOT.
   - B. INLET GRA... OTHERWISE ... GRATES SH...
   - C. CONTRACT... INLET BOX... LONG DIRE...
   - D. ALL STORM ... SPECIFICA... MANUAL, ... ROADWAY ... DICTATED ...
   - E. ALL PIPE ... ACCORDIN...
5. WATER SERVICE:
   - A. WATER MA... INC. WATE... FACILITIES...
   - B. WATER MA... 2' WIDE T...
   - C. A MINIMUM ... VERTICAL ... MAINS AN...
   - D. REFER TO ... BUILDER EXTEN...

AS-BUILT PLAN

Scale: 1" = 40'





LOCATION MAP

1"=2000'

GENERAL NOTES

1. OWNER: RAYMOND S. GRAB AND NORMA JANE GRAB
   151 E BOOT ROAD
   WEST CHESTER, PA 19380
   JUNE RAE GRAB
   200 KING ROAD
   WEST CHESTER, PA 19380

   EQUITABLE OWNER/APPLICANT:
   LEXINGTON LTD
   C/O: RICHARD BATES, PRESIDENT
   119 JOHN ROBERT THOMAS DRIVE
   EXTON, PA 19341
   (610) 524-8090
2. NUMBER OF PROPOSED LOTS: 1
   PROPOSED USE: EXISTING SINGLE FAMILY RESIDENTIAL DWELLING TO REMAIN, 80,700 SF SELF STORAGE FACILITY WITH OFFICE.
3. BOUNDARY AND TOPOGRAPHY FROM SURVEY BY BEIDEMAN ASSOCIATES, INC., 101 FELLOWSHIP ROAD, P.O. BOX 715, UWCHLAN, PA 19480
   BENCHMARK: PA DOT BM 14-A STEEL BRACE HIGH POINT NW LEG POWER LINE TOWER 138' RT CL STA. 94+17. ELEVATION: 528.433
   DATUM: PADOT
4. UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE TAKEN FROM PLANS PROVIDED TO BEIDEMAN ASSOCIATES, INC. BY UTILITY COMPANIES, FROM FIELD SURVEY OF OBSERVABLE EVIDENCE AND FROM FIELD SURVEY OF LINE MARKINGS PLACED BY UTILITY COMPANIES.
5. ALL KNOWN EXISTING SEPTIC SYSTEMS AND WELLS WITHIN 100' OF THE BOUNDARY OF THIS TRACT HAVE BEEN SHOWN.
6. SOILS CLASSIFICATIONS TAKEN FROM THE SOIL SURVEY OF CHESTER AND DELAWARE COUNTIES, PA. DATED MAY 1963 BY THE US DEPARTMENT OF AGRICULTURE.
7. PROPERTY IS PROPOSED TO BE SERVICED BY ON-SITE SEWER FOR THE EXISTING HOUSE AND FOR THE PROPOSED OFFICE. PUBLIC WATER IS PROPOSED FOR THE PROPOSED OFFICE. AN EXISTING WELL WILL BE UTILIZED FOR THE EXISTING HOUSE.
8. BUILDING AND PARKING AREAS ARE PROPOSED IN THE STEEP SLOPE CONSERVATION DISTRICT. THIS IS IN ACCORDANCE WITH WEST WHITELAND TOWNSHIP ZONING ORDINANCE SECTIONS 1402.1.A.(2) AND 1402.1.B.(2) WHERE AN EXEMPTION MAY BE PERMITTED BY CONDITIONAL USE IN AREAS OF MANMADE SLOPES.
9. HOURS OF OPERATION WILL BE FROM 7 AM TO 7 PM WITH ELECTRONIC ACCESS AT ALL TIMES. FULL LIGHTING WILL BE PROVIDED UNTIL 7 PM. SECURITY LIGHTING WILL BE PROVIDED FROM 7 PM TO 7 AM IN ACCORDANCE WITH WEST WHITELAND TOWNSHIP CODE.
10. SEE CONDITIONAL USE DECISION AND ORDER GRANTED BY THE BOARD OF SUPERVISORS OF WEST WHITELAND TOWNSHIP ON APRIL 25, 2000 FOR COMPLETE DETAILS OF ZONING ORDINANCE CONDITIONS IMPOSED.
11. IMPROVEMENTS WITHIN PECO PROPERTY ARE IN ACCORDANCE WITH EASEMENT AGREEMENT BETWEEN PECO AND LEXINGTON, LTD.

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CHESTER

ON THIS, THE ____ DAY OF ______________, 20____, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED RICHARD BATES, CORPORATE OFFICER OF LEXINGTON LTD, WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT HE IS THE EQUITABLE OWNER OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE PLAN THEREOF WAS MADE AT HIS DIRECTION, THAT HE ACKNOWLEDGES THE SAME TO BE RECORDED, AND THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE OFFERED FOR DEDICATION.

______________________ (RICHARD BATES, PRESIDENT)

______________________ (NOTARY PUBLIC OR OTHER OFFICER)

MY COMMISSION EXPIRES ______________, 20____

APPROVED BY THE BOARD OF SUPERVISORS OF WEST WHITELAND TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA, THIS ____ DAY OF ______________, 20____.

____

____

____

WEST WHITELAND TOWNSHIP PLANNING COMMISSION REVIEW: THIS PLAN WAS REVIEWED BY THE WEST WHITELAND PLANNING COMMISSION ON ______________.

______________________ SECRETARY

CHESTER COUNTY PLANNING COMMISSION REVIEW: THIS PLAN WAS REVIEWED BY THE CHESTER COUNTY PLANNING COMMISSION ON ______________.

CCPC FILE NUMBER ______________.

______________________ SECRETARY

RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF CHESTER COUNTY AT WEST CHESTER, PENNSYLVANIA, IN PLAN BOOK ______, PAGE ______, ON THE ______ DAY OF ______________, 20____.

______________________ (DEPUTY) RECORDER OF DEEDS

SEE SHEET #2 FOR CONDITIONAL USE DECISION AND ORDER

SITE DATA

	GROSS	NET (EXCLUDES R/W ONLY)
PREMISES 'A' TRACT 1	2.117 ACRES	1.918 ACRES
PREMISES 'A' TRACT2	2.117 ACRES	1.984 ACRES
PREMISES 'B'	2.946 ACRES	2.559 ACRES
	7.180 ACRES	6.461 ACRES

MAXIMUM BUILDING COVERAGE=15% OF NET AREA
=0.15 x 6.461=0.969
=42,216 SF

PROPOSED BUILDING COVERAGE=42,117 SF

EXISTING IMPERVIOUS COVERAGE (INCLUDEDS PECO TRACT) (INCLUDES BUILDINGS, PAVING, AND STONE PARKING AREAS)	4.035 ACRES	55.5%
PROPOSED IMPERVIOUS COVERAGE (INCLUDES PECO TRACT)	3.42 ACRES	47.0%
PROPOSED PARKING STALLS	6 TOTAL-(1) HANDICAP	

ZONING

R-3 RESIDENTIAL DISTRICT

	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA (NET)	14,000 SF	7.275	7.275
BUILDING COVERAGE	15% MAX	9.4%	15%
IMPERVIOUS COVERAGE	25% MAX	55.5%	47.0%
LOT WIDTH AT STREET LINE	60 FT	1,600 FT	1,600 FT
LOT WIDTH AT BUILDING LINE	80 FT	1,410 FT	1,410 FT
FRONT YARD	40 FT	22 FT	50 FT MIN
REAR YARD	35 FT	35+ FT MIN	35+ FT MIN
SIDE YARD	15 FT (40 FT AGGREGATE)	N/A	15 FT MIN
BUILDING HEIGHT	2 STORIES OR 26 FEET	N/A	26 FEET MAX.

**PER CONDITIONAL USE – SEE GENERAL NOTE #10

STATEMENT OF COMPLIANCE:

TO THE BEST OF MY KNOWLEDGE, INFORMATION, BELIEF, AND WITH THE EXCEPTIONS NOTED, THIS PLAN IS IN CONFORMITY WITH THE ENGINEERING, ZONING, BUILDING, SANITATION, LAND AND OTHER APPLICABLE STANDARDS REQUIRED BY THE WEST WHITELAND TOWNSHIP ZONING ORDINANCE AND SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

______________________ RICHARD A. BATES

______________________ VICTOR KELLY Jr., P.E.

SHEET INDEX

UNDERGROUND UTILITY USERS

Bell Telephone of Pennsylvania
600 Willobrook Lane, Suite 620
West Chester, PA 19382
ATTN: Ms. Susan Fisher
(800) 242-1776
(610) 431-8797

Suburban Cable TV of Chester County
P.O. Box 351
Coatesville, PA 19320
ATTN: Terry Hardy
(610) 692-3160

Philadelphia Electric Company
Main Line Division
2301 Market Street
P.O. Box 8699
Philadelphia, PA 19101
(215) 841-4412

Philadelphia Suburban Water Company
762 Lancaster Avenue
Bryn Mawr, PA 19010
ATTN: Dianne Sweigard
(800) 242-1776
(610) 645-1026

PA One-Call System
(800) 242-1776

PENNSYLVANIA ONE CALL

UNDERGROUND UTILITY USERS SERIAL NUMBER: 2300748

(PURSUANT TO ACT 287, 172, 38 AND ALL OTHER APPLICABLE AMENDMENTS) COMMONWEALTH ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY LINES, STRUCTURES, ETC., SHOWN ON THE PLANS, NOR DOES BEIDEMAN ASSOCIATES, INC. GUARANTEE THAT ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., ARE SHOWN.

THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATIONS OF ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., BEFORE THE START OF WORK. [TELEPHONE: (800) 242-1776]

STORM WATER MANAGEMENT FACILITY
– MAINTENANCE DECLARATION –

ALL STORM WATER MANAGEMENT FACILTIES DEPICTED ON THESE PLANS ARE PERMANENT. LEXINGTON, LTD OR ASSIGNS SHALL BE RESTRICTED FROM REMOVING OR ALTERING THE PERMANENT DETENTION BASIN, APPURTENANT STRUCTURES OR THE PERMANENT INTERCEPTOR AND DIVERSION SWALES WITHOUT THE CONSENT OF WEST WHITELAND TOWNSHIP. LEXINGTON, LTD OR ASSIGNS SHALL BE RESPONSIBLE FOR MAINTAINING THE GRASS IN AND AROUND BASIN AREAS AND FOR GENERAL MAINTENANCE OF ALL APPURTENANT STRUCTURES. ANY STRUCTURAL MAINTENANCE, REPAIR, OR REPLACEMENT SHALL BE THE RESPONSIBILITY OF LEXINGTON, LTD OR ASSIGNS. THE TOWNSHIP SHALL HAVE THE RIGHT TO INSPECT STORM WATER MANAGEMENT FACILITIES AT ANY TIME AND SHALL ALSO HAVE THE RIGHT, BUT NOT THE OBLIGATION, TO ENTER THE LOT FOR THE PURPOSE OF MAINTENANCE IN CASE OF THE OWNER'S DEFAULT. THESE RESTRICTIONS SHALL BE PLACED IN THE FIRST DEED OF CONVEYANCE.

REFERENCES

1. MAP ENTITLED, "TITLE PLAN, SITE PLAN OF PHASE I, BONNIE BLINK PLANNED RESIDENTIAL DEVELOPMENT, WEST WHITELAND TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA MADE FOR BONNIE BLINK LIMITED", BY YERKES ASSOCIATES, INC., WEST CHESTER, PA, RECORDED 12/9/81 AS PLAN #3812.
2. COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF HIGHWAYS DRAWINGS FOR CONSTRUCTION BY THE STATE HIGHWAY AND BRIDGE AUTHORITY, LR 1060 SEC. 1, LR 147 SEC. 16, ALSO LR 202 SEC. 8, LR 15096 SEC. 2, & LR15097 SEC. 2, SHEETS 1-4, 16-19, & 24 OF 34, APPROVED 5/14/68.

GRAPHIC SCALE 1"=40'

0 40 80 120

WAIVERS REQUESTED

A WAIVER IS HEREBY REQUESTED FROM SECTION 303.4.S.(7) OF THE TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE WITH RESPECT TO SIGHT TRIANGLES. THE CLIENT REQUESTS THAT SIGHT DISTANCES AS SHOWN ON THE PLAN AND APPROVED BY PADOT, BE ADEQUATE.

REV #	DATE	DESCRIPTION
6	12/5/00	Added Note #6 to the General Notes on Sheet #9
5	11/14/00	Revised Note #3-Sheet #7, added Forebay Detail-Sheet #8
4	11/7/00	Revised per PADOT comments and relocated existing fence
3	10/9/00	Revised per TPD letter dated 9/26/00 and Comitta comments
2	10/2/00	Revised per SSM letter dated 9/5/00, CCCD letter dated 9/18/00, Stubbs letter dated 9/15/00 and Comitta letter dated 9/13/00
1	8/22/00	Revised per SSM letters dated 7/20/00 & 7/25/00

LAYOUT AND UTILITY PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
FOR
LEXINGTON, LTD

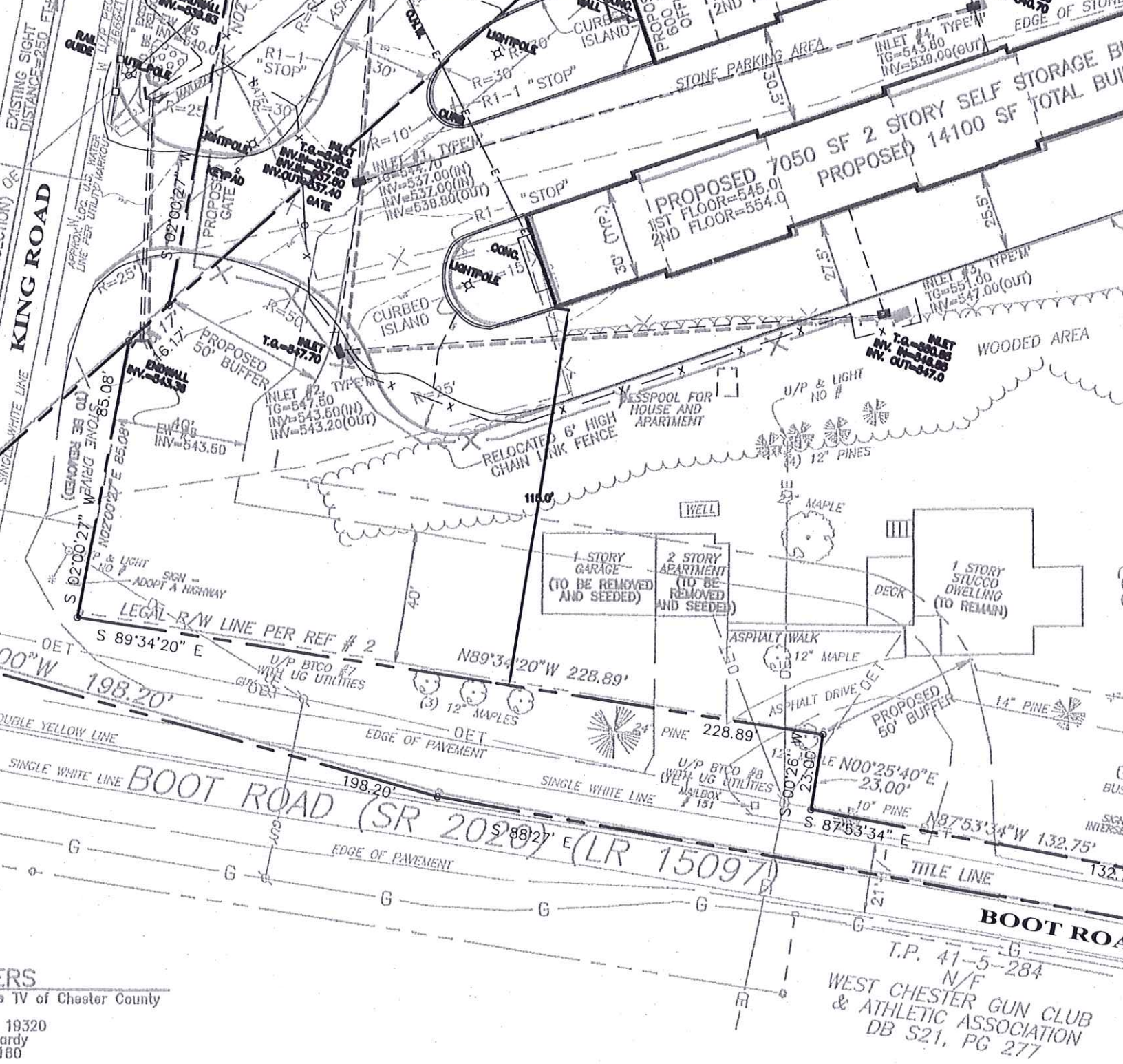
WEST WHITELAND TOWNSHIP — CHESTER COUNTY, PA

COMMONWEALTH ENGINEERS, INC.
101 Fellowship Road • P.O. Box 773 • Uwchland, PA. 19480
610-458-4200 • Fax: 610-458-7168

Date	JUNE 22, 2000
Scale	1" = 40'
Drawn	PLC/JMH/DER
Checked	VK
Dwg. No.	D99055-2
Issued	

Sheet 1 of 9

ASSESSMENT MAP 41-5, PARCELS 270.1, 271 & 278



STORM WATER MANAGEMENT FACILITY — MAINTENANCE DECLARATION —

ALL STORM WATER MANAGEMENT FACILTIES DEPICTED ON THESE PLANS ARE PERMANENT. LEXINGTON, LTD OR ASSIGNS SHALL BE RESTRICTED FROM REMOVING OR ALTERING THE PERMANENT DETENTION BASIN, APPURTENANT STRUCTURES OR THE PERMANENT INTERCEPTOR AND DIVERSION SWALES WITHOUT THE CONSENT OF WEST WHITELAND TOWNSHIP. LEXINGTON, LTD OR ASSIGNS SHALL BE RESPONSIBLE FOR MAINTAINING THE GRASS IN AND AROUND BASIN AREAS AND FOR GENERAL MAINTENANCE OF ALL APPURTENANT STRUCTURES. ANY STRUCTURAL MAINTENANCE, REPAIR, OR REPLACEMENT SHALL BE THE RESPONSIBILITY OF LEXINGTON, LTD OR ASSIGNS. THE TOWNSHIP SHALL HAVE THE RIGHT TO INSPECT STORM WATER MANAGEMENT FACILITIES AT ANY TIME AND SHALL ALSO HAVE THE RIGHT, BUT NOT THE OBLIGATION, TO ENTER THE LOT FOR THE PURPOSE OF MAINTENANCE IN CASE OF THE OWNER'S DEFAULT. THESE RESTRICTIONS SHALL BE PLACED IN THE FIRST DEED OF CONVEYANCE.

ERS
e TV of Chester County
19320
ardy
180

burban Water Company
Avenue
19010
Swelgard
776
026

ER: 2300748
APPLICABLE AMENDMENTS)
ANTEE THE ACCURACY OF
LINES, STRUCTURES, ETC.,
OCIATES, INC. GUARANTEE
, ETC., ARE SHOWN.

O ELEVATIONS OF ALL
FORE THE START OF WORK.

REFERENCES

1. MAP ENTITL RESIDENTIA PENNSYLVA INC., WEST
2. COMMONWEA FOR CONST SEC. 1, LR LR15097

MAP 41-5, PARCELS 270.1, 271 & 278

VALLEY CREEK CORPORATE CENTER

WEST WHITELAND TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

NPDES PERMIT PACKAGE

APPLICANT:

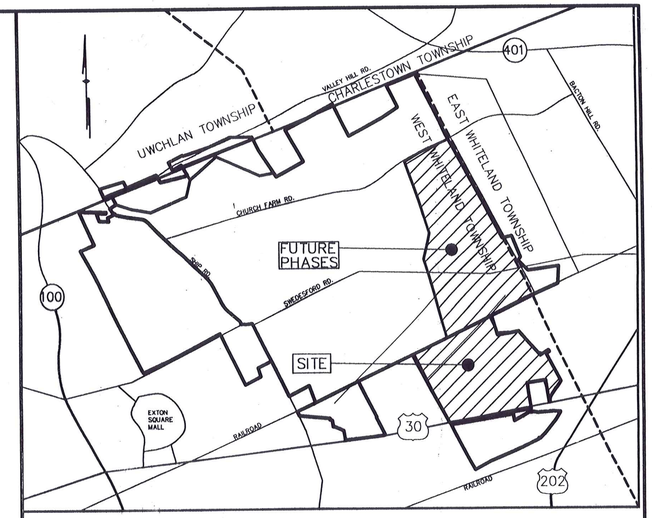
THE RUBENSTEIN COMPANY, L. P.

SUITE 4100
ONE COMMERCE SQUARE
2005 MARKET STREET
PHILADELPHIA, PA 19103

PREPARED BY:

PENNONI ASSOCIATES INC.

ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS
3001 MARKET STREET
PHILADELPHIA, PENNSYLVANIA 19104



LOCATION MAP
N.T.S.

UTILITY USER LIST

THE FOLLOWING USERS ARE KNOWN TO EXIST ON SITE OR IN THE VICINITY OF THE PROJECT. OTHER UTILITIES MAY EXIST WITHIN THE PROJECT WORK AREA. CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. CONTRACTOR MUST PLACE "PA ONE-CALL." PROJECT SERIAL #3351072.

UTILITY	CONTACT	TELEPHONE NUMBER
PHILADELPHIA SUBURBAN WATER COMPANY 762 LANCASTER AVE. BRYN MAWR, PENNSYLVANIA 19010-3489	DAVID C. McINTYRE	1-610-645-1105
SUN PIPELINE COMPANY TEN PENN CENTER 1801 MARKET ST. PHILADELPHIA, PENNSYLVANIA 19103-1699	RICHARD BILLMAN	1-215-786-6261
TRANSCONTINTENTAL GAS PIPELINE COMPANY 214 CARNEGIE CENTER PRINCETON, NEW JERSEY 08540-6237	JOHN BURLESON	1-800-440-8475
MOBIL PIPE LINE COMPANY 675 BROOKS AVENUE ROCHESTER, NEW YORK 14619	EUGENE P. GRAVES OR LARRY LANE	1-716-527-6168
HARRON COMMUNICATIONS 1220 WARD AVENUE, SUITE 400 WEST CHESTER, PENNSYLVANIA 19380-3410	LEE McGARRITY	1-610-436-0429
PECO ENERGY 175 NORTH CALN RD. COATESVILLE PA, 19320	MICHAEL S. FABIAN	1-610-380-2368
BELL ATLANTIC, PA 180 SHEREE BOULEVARD, SUITE 2100 EXTON, PENNSYLVANIA 19341-1224	WILLIAM FIELDS	1-610-666-4940
TEXAS EASTERN TRANSMISSION CORPORATION PO BOX 420 UWCHLAND, PENNSYLVANIA 19480-0420	JIM DUCA	1-610-458-8410

ALL DESIGNERS AND CONTRACTORS UTILIZING THIS PLAN AND THE INFORMATION CONTAINED THEREON ARE CAUTIONED TO COMPLY WITH THE REQUIREMENTS OF PENNSYLVANIA ACT 38, HOUSE BILL 1735 ENTITLED "UNDERGROUND UTILITY LINE PROTECTION."

PENNONI DRAWING INDEX

SEDIMENT & EROSION CONTROL PLANS

DWG. No.	DESCRIPTION	SHEET NO.	DATE	LAST REVISED
C0001	COVER SHEET	1 OF 12	11/19/99	03/08/01
C8000	OVERALL EROSION CONTROL PLAN	2 OF 12	11/19/99	03/08/01
C8001	SEDIMENT & EROSION CONTROL PLAN - A	3 OF 12	11/19/99	02/15/01
C8002	SEDIMENT & EROSION CONTROL PLAN - B	4 OF 12	11/19/99	03/08/01
C8003	SEDIMENT & EROSION CONTROL PLAN - C	5 OF 12	11/19/99	03/08/01
C8004	SEDIMENT & EROSION CONTROL PLAN - D	6 OF 12	11/19/99	03/08/01
C8005	SEDIMENT & EROSION CONTROL PLAN - E	7 OF 12	11/19/99	03/08/01
C8003-II	PHASE 2 SEDIMENT & EROSION CONTROL PLAN - C	8 OF 12	11/19/99	03/08/01
C8501	SEDIMENT & EROSION CONTROL DETAILS	9 OF 12	11/19/99	02/15/01
C8502	SEDIMENT & EROSION CONTROL DETAILS	10 OF 12	11/19/00	02/15/01
C8503	SEDIMENT & EROSION CONTROL DETAILS	11 OF 12	11/19/00	02/15/01
C8504	SEDIMENT & EROSION CONTROL DETAILS	12 OF 12	02/04/01	02/15/01

DWG. NO.: C0001
SHEET 1 OF 12
DATE: FEBRUARY 15, 2001
JOB NO.: RUBE 98N804.02/02